Debtors' Ex. 117

(Part 2 of 2)

Employing workers

- Nearly 40% of low- and lower-middle-income economies prohibit the use of fixed-term contracts for permanent tasks. In many of those economies, such legislation is obsolete.
- Six economies revised legal restrictions on nonstandard working hours in 2018/19.
- In economies with flexible employment regulation, more young women join the labor force.

mployment laws—introduced in response to market failures including worker exploitation, discrimination in hiring and working policies, and unfair dismissal practices—are vital to worker well-being. At the same time, firms should also be free to conduct their business in the most efficient way possible. When labor regulation is too cumbersome for the private sector, economies experience higher unemployment—most pronounced among youth and female workers. With fewer formal job opportunities, workers turn to the informal sector.2 Flexible labor regulation provides workers with the opportunity to choose their jobs and working hours more freely, which in turn increases labor force participation.³

For example, if France were to attain the same degree of labor market flexibility as the United States, its employment rate would rise by 1.6 percentage points, or 14% of the employment gap between the two countries.4 When Sweden increased labor market flexibility, by giving firms with fewer than 11 employees the freedom to exempt two workers from their priority list, labor productivity in small firms increased 2-3% more than it did at larger firms.⁵

Governments face the challenge of striking a balance between worker protection and labor market flexibility. As argued in the World Bank's World Development Report 2019: The Changing Nature of Work, extending protection is the task of the government, not the firm.6 The employing workers indicator set measures the flexibility of employment regulation. The indicators follow the life span of a typical employment relationship—from hiring to work scheduling and eventually to redundancy in a manner consistent with international conventions.7

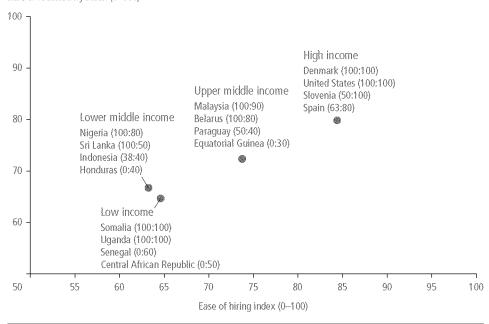
Who regulates employment the most?

Low- and lower-middle-income economies tend to regulate employment more than do high- and upper-middle-income economies (figure 4.1). For example, regulation in the Central African Republic, Madagascar, and Senegal presents significant obstacles for employers hiring new workers or dismissing redundant ones. Among lower-middle-income economies in East Asia and the Pacific, Indonesia is one of the economies with the most rigid employment regulation, particularly on hiring. In the same region and income group, Mongolia allows the use of fixed-term contracts for permanent tasks with no limit on their renewal. In the Europe and Central Asia region, regulation on hiring in Serbia is relatively rigid, and authorities could benefit from the experience of Hungary where employers have the freedom to use fixed-term contracts of up to five years for tasks of a permanent nature.

Many high- and upper-middle-income economies, including Denmark, Namibia, and the United States, have flexible labor regulation. In other advanced economies, including Luxembourg, Slovenia, and Spain, strict labor rules make the process of hiring employees arduous. Research shows

FIGURE 4.1 Low- and lower-middle-income economies regulate employment the most





Source: Doing Business database.

Note: A higher index score indicates more flexible regulation, with 100 being the highest possible score. The dots indicate the income group average score. The numbers indicate the economy's score on the employing workers ease of hiring index (left number) and the ease of redundancy (right number). Computation of the indexes is primarily based on the Doing Business 2013 data notes.

that strict employment protection legislation shapes firms' incentives to enter and exit the economy, which in turn has implications for job creation and economic growth.8 When designing labor laws—specifically those that regulate hiring, work scheduling, and redundancy—authorities must assess the impact on firms.

Ease of hiring

Businesses need flexibility in hiring. Doing Business uses the ease of hiring index to measure the availability and maximum length of a fixed-term contract for a task related to the permanent activities of a firm, the probationary period, and the ratio of the minimum wage to value added per worker. Using a fixed-term contract, an employer can hire a worker for a specific period of time. These contracts afford employers the flexibility to respond quickly to changes during the course of their operations, temporarily substitute workers on leave, and reduce the risk of new business ventures. Fixed-term contracts can be critical to boosting youth employment by acting as a channel for youth to gain work experience.9 Doing Business data show that 124 economies allow fixed-term contracts for permanent tasks. Those that do not are primarily low- and lower-middle-income economies where legislation is obsolete in this area. Honduras, for example, prohibits the use of fixed-term contracts for permanent tasks according to legislation from 1959. Pakistan limits employer flexibility in this area with legislation dating to the 1960s.

Some economies have reformed their laws governing the use of fixedterm contracts. In 2017, as part of a revision of its Labor Code, Nepal introduced fixed-term contracts for permanent tasks, and Benin made fixed-term contract renewal unlimited. Although studies suggest that potential risks could be associated with an overreliance on fixed-term contracts, the availability of fixed-term contracts should be considered in economies that have large youth populations but outdated legislation.¹⁰

The probationary period is used to evaluate a potential full-time employee's suitability for a job, including that person's skills, expertise, and productivity. It is a low-risk mechanism for employers, on the one hand, because it gives them the freedom to terminate employment contracts at a low cost if a worker turns out to be a poor match for the job. 11 Employees, on the other hand, use the probationary period as a means to secure a permanent job. Often the duration varies between different groups of workers, with longer average probationary periods allowed for high-skilled workers. Moldova's labor code, for example, establishes a six-month probationary period for employees in a managerial role and a one-month probationary period for low-skilled employees. The duration of a probationary period also depends on firm size. In Australia, firms with 15 employees or more are allowed to offer a maximum of 6 months of trial period, whereas firms with 14 or fewer employees can employ workers on a probationary basis for the first 12 months of their employment.

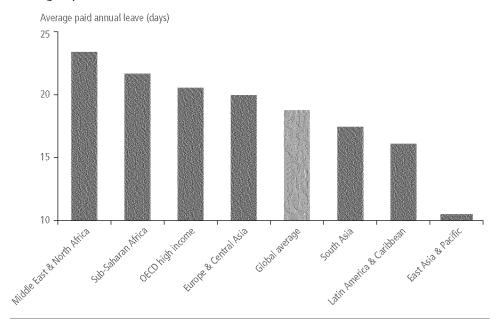
A mandatory minimum wage is designed to ensure that all workers receive fair compensation. Research shows that firms in developing economies struggle to pay minimum wages to their workers because the ratio of minimum wages to median earnings is too high relative to the ratio in high-income economies.12 For example, a 10-percentage-point increase in the minimum wage in Indonesia was associated with a 0.8-percentage-point decrease in employment on average in a given province.¹³ Turkey's subsidy for low-income workers failed to boost either employment or economic activity and negatively affected the fiscal accounts.14 The relationship between minimum wage and employment is sometimes positive, however. A 2018 study on Mauritius—where the minimum wage is set by sector found that a 10% increase in the minimum wage has a slightly positive effect on employment in the covered sector.¹⁵

Flexibility of hours

To capture the flexibility in legislation governing working hours, the employing workers indicator set measures the length of the workweek, restrictions and premiums on nonregular working hours (such as night work, weekly holiday work, and overtime work), and the length of paid annual leave. Research shows that greater employee freedom in choosing working hours leads to higher productivity.16 Nevertheless, daily hours must not be set so high that workers become susceptible to fatigue and reduced productivity.¹⁷ Ninety percent of economies have a workweek that is between five and a half and six days. In 2018/19 Austria and Hungary reformed in the area of working hours. Austria increased overtime to 12 hours per day and 60 hours per week. 18 Hungary raised its overtime allowance to a maximum of 400 hours per calendar year. In 2016, Hungary also removed restrictions on working hours for retail stores, allowing them to open on Sundays.

Paid leave is the period during which workers take time away from their job while continuing to receive an income and social protections. 19 Doing Business measures annual leave days for workers with 1, 5, and 10 years of tenure. With 23.4 working days on average, the Middle East and North Africa is the region with the most paid annual leave, followed by Sub-Saharan Africa with 21.7 days. Workers in Guinea, Libya, and Togo, for example, are entitled to annual leave of 30 working days on average, one and a half times the global average of 18.8 days (figure 4.2). However, 9 out of every 10 employees in Sub-Saharan Africa operate in the informal sector;²⁰ therefore, the intended social protection provided by paid leave reaches only a select few.

FIGURE 4.2 Economies in the Middle East and North Africa and Sub-Saharan Africa have the longest paid annual leave



Source: Doing Business database.

Note: Paid annual leave is measured in working days.

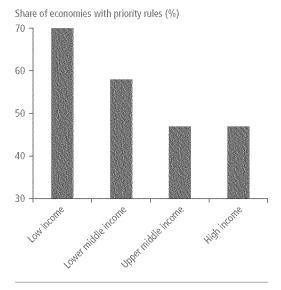
Ease of redundancy

Cumbersome redundancy procedures pose challenges to firms. The employing workers indicator set measures aspects of regulation governing notification and approval requirements, retraining obligations, and priority rules for dismissal and reemployment. Rigid regulation can lead to a misallocation of company resources, providing older workers with job stability while leaving younger, less experienced workers vulnerable.²¹

Redundancy is permitted as grounds for dismissal in all economies except Bolivia, Oman, Tonga, and República Bolivariana de Venezuela. Half of economies globally require that a third party, such as a government agency, be notified of redundancy dismissals of a single employee or group of employees. Although approval obligations are mandatory in just 16% of economies, they complicate the process. In Ghana, for example, an employer must notify the Chief Labor Officer and the trade union of the dismissal of any employee at least three months before termination—such a rule significantly reduces the freedom of employers to adjust to shocks when they arise.22

Priority rules for dismissal stipulate that certain workers must be laid off first on the basis of attributes such as seniority, marital status, or number of dependents. Similarly, priority rules for reemployment require that a firm first offer any position that becomes available to workers previously dismissed for redundancy before opening recruitment to a wider pool of

FIGURE 4.3 Priority rules are most prevalent in low-income economies



Source: Doing Business database.

Note: Data include priority rules for redundancies and reemployment.

applicants. Doing Business data show that priority rules are most widespread in low-income economies (70%), where young and part-time workers remain highly vulnerable in case of redundancy termination (figure 4.3). In Cameroon, an employer must establish the order of redundancy dismissals on the basis of professional aptitude, seniority, and the expenses of a worker's family. Although priority rules aim to protect workers from unfair dismissals, they make it more difficult for those workers perceived as higher-risk—including young, female, immigrant, or disabled workers—to find employment.²³ Economies including the Kyrgyz Republic and Slovenia have eliminated priority rules for reemployment and redundancies.

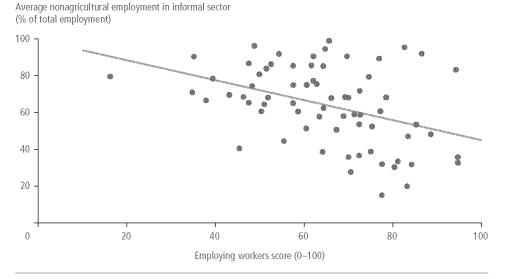
Redundancy cost

Severance payments for redundancy dismissals aim to protect the income of redundant workers. Although the size of severance payments varies across the 79% of Doing Business economies that require them, they can be difficult or impossible for small firms to disburse. South Asia and Sub-Saharan Africa are the regions with the highest redundancy cost. Redundancy costs on average in South-Asia amount to more than twice the weeks of salary paid to redundant workers in the OECD high-income group. In Zambia, severance payments amount to 20 months of salary for workers with 10 years of tenure. Alternative unemployment protection systems, including unemployment benefits, can be more effective at mitigating the effects of an unanticipated worker dismissal. Whereas severance payments do not consider the worker's financial situation, unemployment insurance collects funds to provide support to workers who require support. Moreover, large severance payments rarely reach more vulnerable groups of workers. Unemployment benefit programs have been proven more effective at reaching these groups.²⁴

Why flexible employment regulation matters

When faced with rigid employment protection laws, firms lose the freedom to conduct business efficiently. They find alternative ways to meet their business needs, often hiring workers informally (figure 4.4). A large informal

FIGURE 4.4 Economies with flexible employment regulation tend to have a smaller informal sector



Sources: Doing Business database; World Development Indicators database (http://data.worldbank.org/data-catalog /world-development-indicators), World Bank.

Note: The figure shows the employing workers indicator set score and informal employment rate (2003–18 average). The sample comprises 68 economies. The relationship is significant at the 1% level after controlling for income per capita.

sector, particularly in developing economies, undermines productivity and economic development which, in turn, leads to increased unemployment, especially among disadvantaged groups.²⁵ Unemployed workers, or those with jobs in the informal sector offering no health or social protection benefits, are less likely to come out of poverty.

Restrictive labor regulation also restrains the freedom of employees to choose their employment and working hours, which negatively affects productivity. A firm's ability to adjust to shocks is adversely affected by rigid labor regulation.²⁶ Moreover, firms invest less in new product creation in such an environment.²⁷ Restrictive steps for dismissing workers cause managers to divert their attention from performing more productive tasks and investing time in innovation as well as research and development.²⁸ They also result in smaller firm size and the relocation of firms to economies with flexible regulation, which in turn reduces the benefits of trade liberalization.²⁹

Summary

Although labor laws provide essential protections to workers, firms should not have to confront overly burdensome regulation. By changing restrictive labor regulation, economies could better adjust to fast-changing market conditions and dynamic work environments, generating positive outcomes that include smaller informal sectors, increased employment, and higher growth. Reinstating the option of fixed-term contracts would boost youth employment. Similarly, miscalculated changes to the minimum wage could lead to a decline in employment. Easing redundancy procedures facilitates businesses in allocating resources more efficiently, while revising legal restrictions on nonstandard working hours allows both employers and employees to maintain competitiveness.

Notes

- 1. Djankov and Ramalho 2009.
- 2. Djankov and Ramalho 2009.
- 3. Cournède, Denk, and Garda 2016.
- 4. Di Tella and MacCulloch 2005.
- 5. Bjuggren 2018.
- 6. World Bank 2018.
- 7. Five of the 189 International Labour Organization conventions cover areas measured by Doing Business: hours of work, weekend work, holidays with pay, night work, and employee termination.
- 8. Bottasso, Conti, and Sulis 2016; Fernández and Tamayo 2017.
- 9. Cockx and Picchio 2012.
- 10. Duality of labor markets can have a number of negative outcomes. For a discussion, see Doing Business 2017.
- 11. Marinescu 2009.

- 12. Ahn and others 2019.
- 13. Ahn and others 2019.
- 14. Betcherman, Daysal, and Pagés 2010.
- 15. Asmal and others 2018.
- 16. Collewet and Sauerman 2017.
- 17. Pencavel 2014.
- 18. As stipulated in Austria's Working Time and Rest Periods Act.
- 19. According to International Labour Organization Convention 132 on holidays with pay, employees have the right to take up to three weeks of paid annual leave each year.
- 20. Choi, Dutz, and Usman 2019.
- 21. Francis and others 2018.
- 22. As stipulated in section 65 of Ghana's Labour Act of 2003 (Act 651).
- 23. Kugler and Saint-Paul 2004.
- 24. World Bank 2018.
- 25. Botero and others 2004; Djankov and Ramalho 2009; La Porta and Shleifer 2014.
- 26. Almeida and Carneiro 2009.
- 27. Kleinknecht, van Schaik, and Zhou 2014.
- 28. Lisi and Malo 2017.
- 29. Almeida and Carneiro 2009.

Contracting with the government

- Efficiency in public procurement ensures better use of taxpayer money.
- Awarding a simple contract for road maintenance takes as little as 161 days in the Republic of Korea or as long as 15 months in Chile.
- Resolving complaints raised during the award and execution of a contract takes 330 days in the Czech Republic or more than four years in the Dominican Republic.

n 2007 the Nigerian government awarded a contract for the rehabilitation of a local road. The works were slated to begin in 2009, but the project specifications had been designed six years before the contract was awarded. By the time the contractor started the works, the condition of the road had deteriorated significantly. The project was awarded at less than 60% of the cost required to execute it. At the expiration of the contract period in June 2012, the project was only 8% complete. A decade after the contract award, rehabilitation works were still underway and a trip that would typically take one hour took four.²

Delays and cost overruns are not the only results of nonfunctioning public procurement. The waste of taxpayer money is the worst consequence. Bribes also abound. In Honduras, the now-defunct highway fund, Fondo Vial, awarded contracts to businesses run by a drug cartel to conduct road maintenance in exchange for bribes.3

The contracting with the government indicator set—Doing Business's latest area of research—benchmarks the efficiency of the entire public procurement life cycle, with a focus on the infrastructure sector.

Why does efficient public procurement matter?

Public procurement is the process by which governments purchase goods and services from private firms. In many sectors—for example, transport, infrastructure, and education—public authorities are the principal buyers. Worldwide, public procurement accounts for between 10% and 25% of GDP on average, and governments cumulatively spend \$10 trillion on public contracts each year.4 In OECD member economies, public procurement accounts for 12% of general government expenditures.⁵ At 15%, low-income economies' share of public procurement in GDP is the largest.6 Significant variation exists among economies: the ratio of government expenditure to GDP in Finland and the Netherlands is about 20%, whereas in Bahrain and Oman it is about 7%.7

Inefficient procurement regulation leads to substantial losses of public funds. Studies indicate that excess costs for a public procurement project are in the range of 25-50%.8 Research on the Democratic Republic of Congo, Indonesia, Japan, and Turkey shows that improved competition reduces prices. Similarly, a World Bank study finds that higher accountability leads to lower costs in road construction projects, as do transparency in advertising and tendering in Italy and the Slovak Republic.¹⁰ Competition also deters bribes. A study of 34,000 firms in 88 economies shows that, in economies with more transparent procurement law, firms report paying fewer and smaller bribes to public officials.11

Losses from bribery (that is, when a firm bribes a public official to obtain a contracting advantage) represent on average between 4% and 10% of global procurement spending.¹² A new World Bank study shows that up to one-fifth of the value of government contracts may be lost to corruption.¹³ The indirect costs of corruption lead to distorted competition.

TABLE 5.1 Con	tracting with the government standardized case study assumptions
Procuring entity	 Is the agency in charge of procuring construction works for the authority that owns most of the roads comparable to the one described in the contract section Is the sole funder of the works, has budget for the works, and is solvent
Bidding company	 Is a privately and domestically owned medium-size limited liability company Operates in the economy's largest business city Is up to date with all regulations and is in good standing with all relevant authorities, including those related to taxes Has all licenses and permits needed to operate in this technical area Has already responded to a public call for tender and is already registered with the procuring entity
Contract	 Entails resurfacing 20 kilometers of a flat, two-lane road (not a highway and not under concession), connecting the main business city to another city within the same state, region, or province if applicable, with an asphalt overlay Is valued at \$2.5 million Does not include any other work (such as site clearance, subsoil drainage, bridgework, or further routine maintenance)
Procurement process	Is an open, unrestricted, and competitive public call for tender

The standardized case study

The contracting with the government indicators collect data through a hypothetical scenario. The standardized case study includes assumptions about the procuring entity, the bidding company, the contract, and the procurement process (table 5.1).

The construction sector was chosen because of its ubiquitous nature.¹⁴ Worldwide, construction is a \$2 trillion industry, representing between 5% and 7% of GDP in most economies. 15 Government investment in road transport alone accounts for 2.0-3.5% of GDP.16 Because of construction's role in development (and its size), corruption in this sector is particularly harmful. The cost of collusion in the road sector is estimated at up to 60% of the contract value. 17 Roads and other large infrastructure projects are consistently delivered over budget and over time.18 These overruns range from 20% above estimates in OECD member economies19 to 135% of initial funding authorizations in some developing economies.²⁰

What do the data show?

Three measures—the necessary procedures, the associated time, and the features regulated by the applicable laws—capture various aspects of each phase of the public procurement life cycle, from budgeting to payment (figure 5.1).

- The number of procedures describes a finite number of interactions between the contractor and various public agencies (the procuring entity, any governmental office issuing permits, a court, and so on).
- The number of days describes how long those interactions take.
- The legal index benchmarks which aspects of the public procurement process are regulated by law.



The data show vast differences in how efficient public procurement is worldwide. Sources of delay are found in every phase.

Needs and budgeting

If procuring entities do not begin the procurement cycle with a needs assessment, it is unlikely that the process will have a successful outcome. Overly optimistic budgets from faulty needs assessments result in projects delivered over budget and over time.²¹

The way the contract value is estimated varies greatly—from detailed fact-based analysis to an approximation left in the hands of public officials. In Hong Kong SAR, China, the procuring entity uses multiple instruments to value a contract, including market research to make informed decisions on design options, works implementation programs, cost estimates, and procurement method. The cost of materials is estimated through a price index established by the Civil Engineering Society, and similar projects from previous years inform other cost components. By contrast, procuring entities in Bolivia and Lebanon do not regulate which data should be used to estimate the contract value.

Another indication of planning adequacy is whether budget resources need to be secured before a procurement opportunity is advertised. In many economies, including Poland, a budget allocation is not required to proceed to the tender stage, suggesting that, when the time comes for the procuring entity to pay the contractor, funds might not be available. Others require a budget allocation that ensures that the necessary portion of the yearly budget is set aside for that particular procurement (as is the case in Canada and Slovenia, for example). Spain goes even further: in addition to requiring a budget allocation, the procuring entity must also include a document certifying the availability of funds in the tender documentation.

Budget planning matters a lot. A recent study of shortcomings in planning suggests that engineers' cost estimates are, on average, twice those provided by the funding authorization.²² An improper needs assessment results in unnecessary purchases, waste of public funds, and excessive renegotiations.²³ The prospect of scrutiny enhances the level of attentiveness demonstrated by public officials.²⁴

Tendering, evaluation, and award

At a minimum, governments need to perform the following six procedures to award a public contract:

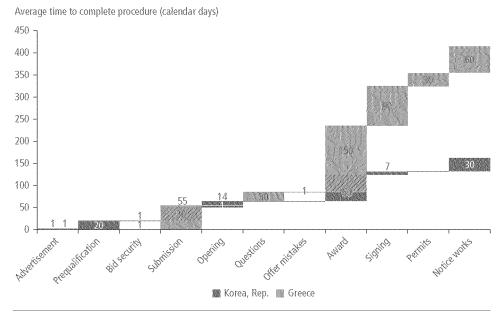
- 1. Communicate the opportunity to the private sector.
- 2. Collect the bids.

- 3. Open all bids received.
- 4. Evaluate the bids and award the contract.
- 5. Sign the contract.
- 6. Authorize the beginning of the works.

These steps are essential to the awarding of a public contract like the standardized case study, and they take place everywhere. How rapidly they are carried out, however, as well as how many additional procedures are required, results in vast differences in efficiency. The opening of all bids received, for example, may happen immediately after the submission deadline, as in Belgium and South Africa, or may take 20 days, as in Tunisia. The time to evaluate all bids and choose the winner is about 30 days in China, Georgia, and Norway, but is more than six months in the Kyrgyz Republic and Lebanon. Additional steps, such as pregualification, take as little as 21 days in Canada or as long as 90 days in Indonesia and Pakistan, and 120 days in Ireland.

Korea—the economy in the sample that awards contracts fastest performs the six necessary procedures in just four months on average (figure 5.2). Two additional steps are required: undergoing a prequalification process (completed in less than three weeks) and obtaining a bid

FIGURE 5.2 Time and procedures to award a public procurement contract for road maintenance in Greece and the Republic of Korea



Source: Doing Business database.

Note: The number in each column refers to the number of days required for each procedure to be performed. If no number is included, that procedure does not take place in that country. In Korea, the bidding process takes 8 procedures; in Greece, it takes 10.

security (done simultaneously with the submission of the bid). All in all, awarding a simple routine contract for road resurfacing in Korea takes 161 days on average.

In other economies, the process is more convoluted. In Greece, for example, it takes one year to perform the six procedures. The deadline for submission of the bids is almost twice as long as in Korea (55 compared to 30 days). The evaluation of all bids received takes five months, and back and forth between contractors and the procuring entity typically delays it by an additional month. Once the decision is made and all documents are ready, signing the contract should take place in a matter of days. Instead, it takes an additional three months because of the need to receive approval from the Court of Auditors. Once this approval is obtained and the contract is signed, the contractor still needs to obtain an activity permit and an environmental permit before being able to commence the works—taking an additional month.

Greece grants those permits efficiently. Other economies do not. Obtaining permits to work on the road (such as occupancy permits, environmental permits, or traffic permits, if applicable) takes five months in the Arab Republic of Egypt and seven months in São Paulo, Brazil. In these economies, contractors aiming to work on government projects spend months obtaining permits from public authorities.

Efficiency in awarding public contracts improves the level of competition and encourages the participation of suppliers.²⁵

Contract amendments, invoicing, and payment

Once the works begin, three procedures are necessary:

- 1. The contractor needs to let the procuring entity know that the works are complete.
- 2. The procuring entity needs to confirm that the works are indeed complete.
- 3. The contractor needs to receive payment.

Efficiency in carrying out these steps, however, varies tremendously. Issuing a certificate of completion report takes two weeks or less in Australia, Canada, Denmark, Finland, Hungary, the Netherlands, and Malaysia; but contractors are left waiting for more than six months in Italy. Disagreements between the procuring entity and the contractor on whether the works were properly performed may significantly delay this approval (by 320 days in Mongolia and 455 days in República Bolivariana de Venezuela, for example). The process does not end there. Despite agreement by both parties, contractors may have to wait months to obtain payment. In Lebanon, Mali, and Panama, obtaining payment takes more than six months.

Contract amendments are another source of delays during the execution of the contract. Although frequent amendments indicate poor planning, how well the procuring entity handles such amendments is an indication of efficiency. A simple change order, such as for example a change in materials that had been provided for in the initial procurement document, delays execution of the works by as little as two weeks in Canada and Finland, or as long as four months in Armenia. A more significant renegotiation of one or more contract terms delays the process by 135 days in Mexico City, Mexico, or 180 days in Tanzania. More efficient economies handle this unexpected occurrence in three weeks (as in Finland and Korea). All in all, delays in contract execution vary widely across the world. In Ireland, this phase takes five procedures and 153 days, whereas in Mozambique it takes eight procedures and 716 days.

Changes in contract terms and values are the most common channels of corruption in public procurement.²⁶ When the work is complete, low-quality goods are used to defraud procuring entities.²⁷ The delivery of substandard (overpaid) works—or a failure to deliver them at all represents the most significant risk of this phase. Occasionally, before the delivery of subpar goods is detected, officials in the procuring entity may delay payment for completed works to solicit bribes.²⁸ A lack of transparency during the invoicing and payment phase leads to misuse of public funds.

Complaints

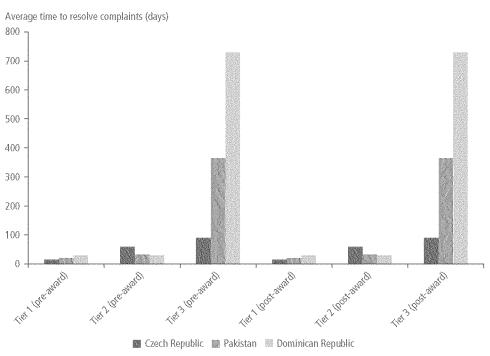
Complaints are claims brought against the public administration throughout the public procurement process. They are brought before or after the award and may refer to a variety of issues. A potential bidder, for example, could argue that the tender documents favor a specific bidder, or that a costly performance guarantee hinders access by small firms. An environmental nongovernmental organization could claim that the works harm a protected species, or that the tender documents do not include environmental parameters to ensure that they are executed in a sustainable manner. Once the contract is awarded, losing bidders could challenge the grounds of their exclusion or claim that the procuring entity granted special treatment to the winning bidder. In some cases, raising a complaint might be necessary to ensure fairness in the process. In others, it is used as a dilatory technique.

Trust in complaints procedures increases participation in the public procurement process, obtaining the best value for money. In turn, inefficient complaint resolution can stall the award and execution of a simple contract for years.

There is no minimum set of procedures to determine whether complaints work efficiently. Instead, the contracting with the government indicator set measures complaints brought before and after award, and focuses on who brings these complaints, which authority would have jurisdiction to hear them, how often they are raised, how long they would take to be resolved, and whether they suspend the procurement process.

In the Czech Republic, where complaints are usually pursued until there is no further recourse available (three tiers before contract award and three tiers after), resolving these complaints takes 330 days on average (figure 5.3). Resolving the same complaint in the Dominican

FIGURE 5.3 Calendar days to resolve complaints in the Czech Republic, the Dominican Republic, and Pakistan



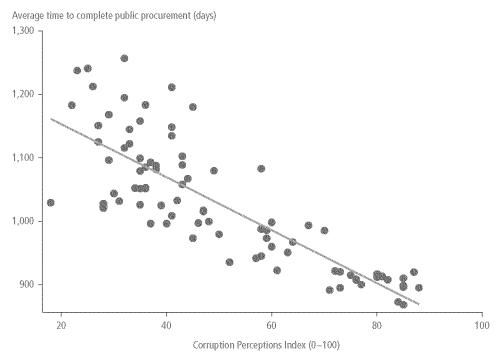
Source: Doing Business database.

Note: "Pre-award" refers to any challenge raised before the contract is awarded, such as that of a bidder arguing that the tender documents favor one specific company. "Post-award" refers to any challenge raised after the contract is awarded, such as by a bidder arguing that one of the evaluation criteria was used arbitrarily by the procuring entity to reduce the bidder's final score. Tier 1, tier 2, and tier 3 refer to the number of instances such a challenge would typically undergo.

Republic would take more than four years (1,580 days). Worldwide, resolving complaints takes longer when courts are involved, and tends to be more efficient once a dedicated administrative authority is in charge. In 2011, Tanzania established the Public Procurement Appeals Authority as an independent and quasi-judicial administrative body to resolve appeals from challenges against procuring entities in an efficient and specialized manner. As a result, challenges against award decisions are decided in 41 days, and challenges on tender documents are resolved in 18 days.

The public procurement process is carried out in a similar way around the world, but its efficiency varies greatly. And efficiency matters. Data show that, on average, economies with more efficient public procurement—as measured by the time it takes to award a contract, manage the unexpected during execution, obtain payment, and resolve challenges—tend to have lower perceived levels of corruption (figure 5.4).

FIGURE 5.4 Faster public procurement processes are associated with higher overall levels of transparency



Sources: Doing Business database; Transparency International data (https://www.transparency.org/cpi2018). Note: The Transparency International Corruption Perception Index 2018 captures perception of public sector corruption according to experts and businesspeople, using a scale of 0 (highly corrupt) to 100 (very clean). The public procurement time is recorded in calendar days. The sample includes the 85 economies for which contracting with the government data were finalized as of July 2019. The relationship is significant at the 1% level after controlling for income per capita.

Summary

The contracting with the government dataset constitutes a one-of-akind repository of comparable data on how the public procurement process is carried out worldwide. These data inform change. Moreover, the impact of these reforms goes beyond effective public procurement. It affects management of public funds, efficiency in their expenditure, and accountability of public officials. It also fosters innovation in the delivery of projects, potentially leading to cost savings for governments worldwide. Along with all other Doing Business indicators, the contracting with the government dataset will be an important tool for governments and researchers to design more efficient rules that promote growth and development.

Notes

- 1. Chidolue, Nwajuaku, and Okonkwo 2013.
- 2. Ochayi, Chris. 2016. "FG Set to Rehabilitate Enugu-Onitsha Expressway." Vanguard, September 19. https://www.vanguardngr.com/2016/09 /fg-set-rehabilitate-enugu-onitsha-expressway/.
- 3. Gagne, David. 2017. "Contracts Awarded to Honduras Drug Clan Illustrate Cyclical Corruption." InSight Crime, March 9. https://www.insightcrime.org/news/analysis /contracts-awarded-honduran-drug-caln-illustrate-cyclical-corruption/.
- 4. European Commission, DG Enterprise and Industry 2014.
- 5. These and other OECD statistics on public procurement can be accessed at http://stats.oecd.org/Index.aspx?QueryId=78413.
- 6. Djankov, Simeon, Asif Islam, and Federica Saliola. 2016. "How Large Is Public Procurement in Developing Countries." Peterson Institute for International Economics (PIEE) Realtime Economic Issues Watch (blog), November 7. https://www.piie.com/blogs/realtime -economic-issues-watch/how-large-public-procurement-developing-countries.
- 7. Djankov, Islam, and Saliola 2016.
- 8. Ades and Di Tella 1997; Bardhan 1997; Rose-Ackerman 1996a; Rose-Ackerman 1996b.
- 9. Iimi 2006; Galletta, Jametti, and Redonda 2015; Onur, Özcan, and Taş 2012; Soraya 2009.
- 10. Coviello and Mariniello 2014; Pavel and Sičáková-Beblavá 2013.
- 11. Knack, Biletska, and Kacker 2017.
- 12. Auriol 2006.
- 13. World Bank 2012.
- 14. Wells 2013.
- 15. Kenny 2009.
- 16. Kenny 2009.
- 17. Collier, Kirchberger, and Söderbom 2015; Wells 2013.
- 18. Flyvbjerg, Garbuio, and Lovallo 2009.
- 19. Flyvbjerg, Bruzelius, and Rothengatter 2003.
- 20. Chong and Hopkins 2016.
- 21. Flyvbjerg 2017; Chong and Hopkins 2016.
- 22. Chong and Hopkins 2016.
- 23. Decarolis and Palumbo 2015.
- 24. Bertók 2005.
- 25. Kinsey 2004.
- 26. See red flags 8 and 9 at of the World Bank Group's "Most Common Red Flags of Fraud and Corruption" at https://www.worldbank.org/en/about/unit /sanctions-system/osd/brief/common-red-flags-of-fraud-and-corruption-in -procurement; Dudkin and Välilä 2006.
- 27. See red flag 10 at https://www.worldbank.org/en/about/unit/sanctions-system /osd/brief/common-red-flags-of-fraud-and-corruption-in-procurement.
- 28. Campos and Pradhan 2007.

CHAPTER 6

Ease of doing business score and ease of doing business ranking

Doing Business presents results for two aggregate measures: the ease of doing business score and the ease of doing business ranking, which is based on the ease of doing business score. The ease of doing business ranking compares economies with one another; the ease of doing business scores benchmark economies with respect to regulatory best practice, showing the proximity to the best regulatory performance on each Doing Business indicator. When compared across years, the ease of doing business score shows how much the regulatory environment for local entrepreneurs in an economy has changed over time in absolute terms, whereas the ease of doing business ranking shows only how much the regulatory environment has changed relative to that in other economies.

Ease of doing business score

The ease of doing business score measures an economy's performance with respect to a measure of regulatory best practice across the entire sample of 41 indicators for 10 Doing Business topics (the employing workers and contracting with the government indicators are excluded). For starting a business, for example, Georgia and New Zealand have the lowest number of procedures required (1). New Zealand also holds the shortest time to start a business (0.5 days), whereas Rwanda and Slovenia have the lowest cost (0.0). Australia, Colombia, and 118 other economies have no paid-in minimum capital requirement (table 6.1).

Calculation of the ease of doing business score

Calculating the ease of doing business score for each economy involves two main steps. In the first step individual component indicators are normalized to a common unit where each of the 41 component indicators y (except for the total tax and contribution rate) is rescaled using the linear transformation (worst -y)/(worst - best). In this formulation the highest score represents the best regulatory performance on the indicator across all economies since 2005 or the third year in which data for the indicator were collected. Both the best regulatory performance and the worst regulatory performance are established every five years1 on the basis of the Doing Business data for the year in which they are established and remain at that level for the five years regardless of any changes in data in interim years. Thus an economy may establish the best regulatory performance for an indicator even though it may not have the highest score in a subsequent year. Conversely, an economy may score higher than the best regulatory performance if the economy reforms after the best regulatory performance is set. For example, the best regulatory performance for the time to get electricity is set at 18 days. In the Republic of Korea it now takes 13 days to get electricity, and in the United Arab Emirates it takes just 7 days. Although the two economies have different times, both economies score 100 on the time to get electricity because they have exceeded the threshold of 18 days.

For scores on indexes such as the strength of legal rights index or the quality of land administration index, the best regulatory performance is set at the highest possible value (although no economy has yet reached that value in the case of the latter). For the total tax and contribution rate, consistent with the use of a threshold in calculating the rankings on this indicator, the best regulatory performance is defined as the total tax and contribution rate at the 15th percentile of the overall distribution for all years included in the analysis up to and including Doing Business 2015. For the time to pay taxes, the best regulatory performance is defined as the lowest time recorded among all economies that levy the three major taxes: profit tax, labor taxes and mandatory contributions, and value added tax (VAT) or sales tax. For the different times to trade across borders, the best regulatory performance is defined as one hour even though in many economies the time is less than that.

	Economy establishing best regulatory	Best regulatory	Worst_regulatory		
Topic and indicator Starting a business	performance	performance	performance		
Procedures (number)	Georgia; New Zealand	1	18ª		
, , , , , , , , , , , , , , , , , , , ,	New Zealand	0.5	100b		
Time (days)	Rwanda: Slovenia		200.0b		
Cost (% of income per capita)		·	******		
Minimum capital (% of income per capita) Dealing with construction permits	Australia; Colombia; Mauritius ^c	0.0	400.0 ^b		
Procedures (number)	No accommunacy a best performer as of May 1, 2010 d	5	30°		
Time (days)	No economy was a best performer as of May 1, 2019.d	26			
	No economy was a best performer as of May 1, 2019.d		373b		
Cost (% of warehouse value)	No economy was a best performer as of May 1, 2019. ^d	0.0	20.05		
Building quality control index (0–15)	China; Luxembourg; United Arab Emirates*	15	0 ^f		
Getting electricity		-			
Procedures (number)	Germany; Kenya; Republic of Korea ^g	3	9ª		
Time (days)	Republic of Korea; St. Kitts and Nevis; United Arab Emirates	18	248 ^b		
Cost (% of income per capita)	China; Japan; United Arab Emirates	0.0	8,100.0 ^b		
Reliability of supply and transparency of tariffs index (0–8)	Costa Rica; Ireland; Malaysia ^h	8	O ^f		
Registering property					
Procedures (number)	Georgia; Norway; Portugal ⁱ	1	13ª		
Time (days)	Georgia; Qatar	1	210 ^b		
Cost (% of property value)	Saudi Arabia	0.0	15.0 ^b		
Quality of land administration index (0–30)	No economy has reached the best performance yet.	30	Of		
Getting credit					
Strength of legal rights index (0–12)	Brunei Darussalam; Montenegro; New Zealandi	12	O ^f		
Depth of credit information index (0–8)	Ecuador; Israel; United Kingdom ^k	8	0 ^f		
Protecting minority investors					
Extent of disclosure index (0–10)	China; Malaysia; United Kingdom ^l	10	Of		
Extent of director liability index (0–10)	Cambodia; Kenya; United Arab Emirates	10	O ^f		
Ease of shareholder suits index (0—10)	Djibouti	10	O ^f		
Extent of shareholder rights index (0–6)	India; Kazakhstan; Malta ^m	6	Of_		
Extent of ownership and control index (0–7)	Bahrain; Colombia; Uzbekistan ⁿ	7	O ^f		
Extent of corporate transparency index (0–7)	France; Norway; Taiwan, China°	7	Of		
Paying taxes					
Payments (number per year)	Hong Kong SAR, China	3	63 ^b		
Time (hours per year)	Singapore	49 ^p	696 ^b		
Total tax and contribution rate (% of profit)	Canada; Denmark; Singapore ^q	26.1	84.0 ^b		
Postfiling index (0–100)	No economy with both CIT and VAT has reached the best performance yet.	100	0		
Time to comply with VAT refund (hours)	Croatia; Republic of Korea; Netherlands	0	50 ^b		
Time to obtain VAT refund (weeks)	Austria, Estonia	3.2	55°		
Time to comply with corporate income tax correction (hours)	Estonia; Lithuania; Portugal ^t	1.5	56 ^b		
Time to complete a corporate income tax correction	Japan; Sweden; United States	Ov	32 ^b		

(table continued on next page)

Topic and indicator	Economy establishing best regulatory performance	Best regulatory performance	Worst regulatory performance	
Trading across borders	performance	periormance	performance	
Time to export				
Documentary compliance (hours)	Canada; Poland; Spain™	1 ^x	170b	
Border compliance (hours)	Austria; Belgium; Denmark ^y	1×	160b	
Cost to export			5075	
Documentary compliance (US\$)	Hungary; Luxembourg; Norway ^z	0	400 ^b	
Border compliance (US\$)	France; Netherlands; Portugal ^{aa}	0	1,060b	
Time to import				
Documentary compliance (hours)	Republic of Korea; Latvia; New Zealand ^{tb}	1×	240 ^b	
Border compliance (hours)	Estonia; France; Germany [∞]	1×	280 ^b	
Cost to import			1	
Documentary compliance (US\$)	Iceland; Latvia; United Kingdom ^{dd}	0	700b	
Border compliance (US\$)	Belgium; Denmark; Estoniaee	0	1,200b	
Enforcing contracts				
Time (days)	Singapore	120	1,340 ^b	
Cost (% of claim)	Bhutan	0.1	89.0 ^b	
Quality of judicial processes index (0–18)	No economy has reached the best performance yet.	18	O ^f	
Resolving insolvency				
Recovery rate (cents on the dollar)	Norway	92.9	O ^f	
Strength of insolvency framework index (0–16)	No economy has reached the best performance yet.	16	Of	

Source: Doing Business database.

Note: CIT = corporate income tax; VAT = value added tax.

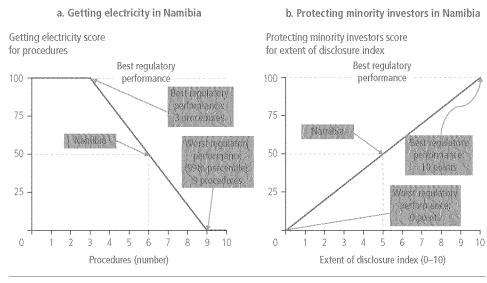
- a. Worst performance is defined as the 99th percentile among all economies in the Doing Business sample.
- b. Worst performance is defined as the 95th percentile among all economies in the Doing Business sample.
- c. Another 117 economies also have a paid-in minimum capital requirement of 0.0.
- d. No economy was a best performer as of May 1, 2019, due to data revisions.
- Another three economies score 15 out of 15 on the building quality control index.
- Worst performance is the worst value recorded.
- g. In 25 other economies it takes no more than three procedures to get an electricity connection.
- h. Another 23 economies score 8 out of 8 on the reliability of supply and transparency of tariffs index.
- Two more economies record one procedure to register property.
- Two additional economies score 12 out of 12 on the strength of legal rights index.
- k. Another 50 economies score 8 out of 8 on the depth of credit information index.
- Another 10 economies score 10 out of 10 on the extent of disclosure index.
- m. Another 16 economies score 6 out of 6 on the extent of shareholders rights index.
- n. Another six economies score 7 out of 7 on the extent of ownership and control index.
- o. Another 10 economies score 7 out of 7 on the extent of corporate transparency index.
- Defined as the lowest time recorded among all economies in the Doing Business sample that levy the three major taxes: profit tax, labor taxes and mandatory contributions, and VAT or sales tax.
- Another 30 economies have a total tax and contribution rate equal to or lower than 26.1% of profits.
- Defined as the highest total tax and contribution rate among the 15% of economies with the lowest total tax and contribution rate in the Doing Business sample for all years included in the analysis up to and including Doing Business 2015.
- Another eight economies also have a compliance time for VAT refund of 0 hours.
- Another 11 economies also have a compliance time for corporate income tax correction of no more than 1.5 hours.
- Another 96 economies also do not impose a corporate income tax correction.
- Time to complete a corporate income tax correction is 0 when there is no audit measured for the economy. No audit is measured when the percentage of cases exposed to an additional review is less than 25%.
- w. Another 23 economies also have a documentary compliance time to export of no more than 1 hour.
- Defined as 1 hour even though in many economies the time is less.
- Another 16 economies also have a border compliance time to export of no more than 1 hour.
- z. Another 17 economies also have a documentary compliance cost to export of 0.0.
- aa. Another 16 economies also have a border compliance cost to export of 0.0.
- bb. Another 27 economies also have a documentary compliance time to import of no more than 1 hour.
- cc. Another 22 economies also have a border compliance time to import of no more than 1 hour.
- dd. Another 27 economies also have a documentary compliance cost to import of 0.0.
- ee. Another 25 economies also have a border compliance cost to import of 0.0.

In the same formulation, to mitigate the effects of extreme outliers in the distributions of the rescaled data for most component indicators (very few economies need 700 days to complete the procedures to start a business, but many need 9 days), the worst performance is calculated after the removal of outliers. The definition of outliers is based on the distribution for each component indicator. To simplify the process two rules were defined: the 95th percentile is used for the indicators with the most dispersed distributions (including minimum capital, number of payments to pay taxes, and the time and cost indicators), and the 99th percentile is used for number of procedures. No outlier is removed for component indicators bound by definition or construction, including legal index scores (such as the depth of credit information index, extent of disclosure index, and strength of insolvency framework index) and the recovery rate (figure 6.1).

In the second step for calculating the ease of doing business score, the scores obtained for individual indicators for each economy are aggregated through simple averaging into one score, first for each topic and then across all 10 topics: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. More complex aggregation methods—such as principal components and unobserved components—yield a ranking nearly identical to the simple average used by *Doing Business*.² Thus *Doing Business* uses the simplest method: weighting all topics equally and, within each topic, giving equal weight to each of the topic components.³

An economy's score is indicated on a scale from 0 to 100, where 0 represents the worst regulatory performance and 100 the best regulatory performance. All topic ranking calculations and the ease of doing business ranking calculations are based on scores without rounding.

FIGURE 6.1 How are scores calculated for indicators?



Source: Doing Business database.

The difference between an economy's score in any previous year and its score in Doing Business 2020 illustrates the extent to which the economy has changed in its business regulatory environment over time. In any given year, the score measures how close an economy is to the best regulatory performance at that time.

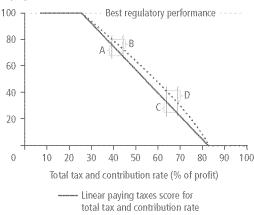
Treatment of the total tax and contribution rate

The total tax and contribution rate component of the paying taxes topic enters the score calculation in a different way than any other indicator. The score obtained for the total tax and contribution rate is transformed in a nonlinear fashion before it enters the score for paying taxes. As a result of the nonlinear transformation, an increase in the total tax and contribution rate has a smaller impact on the score for the total tax and contribution rate—and therefore on the score for paying taxes—for economies with a below-average total tax and contribution rate than it would have had before this approach was adopted in *Doing Business 2015* (line B is smaller than line A in figure 6.2). For economies with an extreme total tax and contribution rate (a rate that is very high relative to the average), an increase has a greater impact on both these scores than it would have had before (line D is bigger than line C in figure 6.2).

The nonlinear transformation is not based on any economic theory of an "optimal tax rate" that minimizes distortions or maximizes efficiency in an economy's overall tax system. Instead, it is mainly empirical in nature.

FIGURE 6.2 How the nonlinear transformation affects the paying taxes score for the total tax and contribution rate

Paying taxes score for total tax and contribution rate



Nonlinear paving taxes score for

total tax and contribution rate Change in paying taxes score

Source: Doing Business database.

Note: The nonlinear paying taxes score for the total tax and contribution rate is equal to the paying taxes score for the total tax and contribution rate to the power of 0.8.

The nonlinear transformation along with the threshold reduces the bias in the indicator toward economies that do not need to levy significant taxes on companies like the Doing Business standardized case study company because they raise public revenue in other ways—for example, through taxes on foreign companies, through taxes on sectors other than manufacturing, or from natural resources (all of which are outside the scope of the methodology). In addition, it acknowledges the need of economies to collect taxes from firms.

Calculation of scores for economies with two cities covered

For each of the 11 economies in which *Doing Business* collects data for the second-largest business

TABLE 6.2 Weights used in calculating the distance to frontier scores for economies with two cities covered

Economy	City	Weight (%)				
Bangladesh	Dhaka	78				
	Chittagong	22				
*		61				
	Rio de Janeiro	39				
China	Shanghai	55				
	Beijing	45				
India	Mumbai	47				
***************************************	Delhi	53				
Indonesia	Jakarta	78				
	Surabaya	22				
Japan	Tokyo	65				
	Osaka	35				
Mexico	Mexico City	83				
	Monterrey	17				
Nigeria	Lagos	77				
	Kano	23				
Pakistan	Karachi	65				
	Lahore	35				
Russian	Moscow	70				
Federation	St. Petersburg	30				
United	New York City	60				
States	Los Angeles	40				

Source: United Nations, Department of Economic and Social Affairs, Population Division, World Urbanization Prospects, 2014 Revision, "File 12: Population of Urban Agglomerations with 300,000 Inhabitants or More in 2014, by Country, 1950-2030 (thousands)," http://esa. un.org/unpd/wup/CD-ROM/Default.aspx.

city as well as the largest one, the score is calculated as the population-weighted average of the scores for these two cities (table 6.2). This calculation is done for the aggregate ease of doing business score, the scores for each topic, and the scores for all the component indicators for each topic.

Variability of economies' scores across topics

Each Doing Business topic measures a different aspect of the business regulatory environment. The scores and associated rankings of an economy can vary, sometimes significantly, across topics. The average correlation coefficient between the 10 topics included in the aggregate ease of doing business score is 0.50, and the coefficients between two topics range from 0.32 (between getting credit and paying taxes) to 0.68 (between dealing with construction permits and getting electricity). These correlations suggest that economies rarely score universally well or universally badly on *Doing Business* topics (table 6.3).

Consider the example of Portugal. Its aggregate ease of doing business score is 76.5. It scores 90.9 for starting a business and 100.0 for trading across borders, but only 62.0 for protecting minority investors and 45.0 for getting credit.

Figure 1.1 in chapter 1, "About Doing Business," illustrates the degree of variability for each economy's performance

across the different areas of business regulation covered by Doing Business. The figure draws attention to economies with a particularly uneven performance by showing, for each economy, the distance between the average of its highest three scores and the average of its lowest three across the 10 topics included in this year's aggregate ease of doing business score. Whereas a relatively small distance between these two averages suggests a broadly consistent approach across the areas of business regulation measured by Doing Business, a relatively large distance suggests a more uneven approach, with greater room for improvement in some areas than in others.

Variation in performance across topics is not at all unusual. It reflects differences in the degree of priority that government authorities give to particular areas of business regulation reform and in the ability of different government agencies to deliver tangible results in their area of responsibility.

TABLE 6.3 Correlations	betwe	en eco	nomy s	scores	or Doi	ng Bus	iness to	opics	
	Dealing with construction permits	Getting electricity	Registering property	Getting credit	Protecting minority investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency
Starting a business	0.50	0.46	0.39	0.37	0.51	0.55	0.40	0.38	0.45
Dealing with construction permits		0.68	0.50	0.41	0.56	0.49	0.52	0.43	0.44
Getting electricity			0.51	0.45	0.61	0.57	0.65	0.51	0.58
Registering property				0.46	0.51	0.50	0.50	0.60	0.52
Getting credit					0.53	0.32	0.41	0.36	0.51
Protecting minority investors						0.52	0.50	0.52	0.64
Paying taxes							0.56	0.51	0.46
Trading across borders								0.49	0.54
Enforcing contracts									0.45

Source: Doing Business database.

Change in the score gap

Many topics assess the impact of data changes on the basis of the absolute change in the overall score of the indicator set and the change in the relative score gap. The change in the score gap—or the distance to the best regulatory performance—is defined as (score prior year – score current year)/(100 – score prior year), where "score" is the aggregate score for the specific topic. For indicators using macroeconomic variables, such as the cost of starting a business as a percentage of income per capita, the macroeconomic data for the prior year are used to control for exogenous factors such as a change in income per capita. For example, in 2018/19 Papua New Guinea reduced the time and cost to trade across borders, resulting in an improvement in its aggregate score for trading across borders from 60.5 to 65.8. This improved the overall score by 65.8 – 60.5 or 5.3 points, and reduced the score gap for Papua New Guinea by (60.5 - 65.8)/(100 - 60.5) or 13.4% on trading across borders in Doing Business 2020. For a complete discussion of the methodology for classifying changes as reforms, see the *Doing Business* website.

Economies improving the most across three or more Doing Business topics in 2018/19

Doing Business 2020 uses a simple method to calculate which economies improved the ease of doing business score the most. First, it selects the economies that in 2018/19 implemented regulatory reforms making it easier to do business in 3 or more of the 10 topics included in this year's aggregate ease of doing business score.4 Forty-two economies meet this

criterion: Armenia; Azerbaijan; The Bahamas; Bahrain; Bangladesh; Cabo Verde; China; Colombia; the Democratic Republic of Congo; Djibouti; the Arab Republic of Egypt; Eswatini; Gabon; India; Indonesia; Israel; Jordan; Kenya; Kosovo; Kuwait; the Kyrgyz Republic; Mauritius; Moldova; Morocco; Myanmar; Nigeria; Oman; Pakistan; Philippines; Qatar; the Russian Federation; Rwanda; Saudi Arabia; Serbia; Tajikistan; Togo; Tunisia; Ukraine; United Arab Emirates; United States; Uzbekistan; and Zimbabwe. Second, Doing Business sorts these economies on the increase in their ease of doing business score over the previous year, and the scores for both years are calculated using the same macroeconomic data (such as income per capita and currency conversion rates) to remove the effect of changes in these variables.

Selecting the economies that implemented regulatory reforms in at least three topics and had the biggest improvements in their ease of doing business scores is intended to highlight economies with ongoing, broadbased reform programs. The improvement in the ease of doing business score is used to identify the top improvers because it allows a focus on the absolute improvement—in contrast with the relative improvement shown by a change in rankings—that economies have made in their regulatory environment for business.

Ease of doing business ranking

The ease of doing business ranking ranges from 1 to 190. The ranking of economies is determined by sorting the aggregate ease of doing business scores.

Notes

- 1. The next update will be published in *Doing Business 2021* along with several other methodological changes such as the introduction of the contracting with the government indicators.
- See Djankov and others 2005. Principal components and unobserved components methods yield a ranking nearly identical to that from the simple average method because both these methods assign roughly equal weights to the topics, because the pairwise correlations among topics do not differ much. An alternative to the simple average method is to give different weights to the topics, depending on which are considered of more or less importance in the context of a specific economy.
- For getting credit and protecting minority investors, indicators are weighted proportionally, according to their contribution to the total score. The getting credit indicator weighs 60% assigned to the strength of legal rights index and 40% to the depth of credit information index. For protecting minority investors, the extent of disclosure index, the extent of director liability index, and the ease of shareholder suits index are each assigned a weight of 20%, whereas the extent of shareholder rights index

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- has a weight of 12% and the extent of ownership and control index and the extent of corporate transparency index each weigh 14%. Indicators for all other topics are assigned equal weights.
- 4. Changes making it more difficult to do business are subtracted from the total number of those making it easier to do business.

CHAPTER 7

Summaries of *Doing Business* reforms in 2018/19

Doing Business reforms affecting all sets of indicators included in this year's study, implemented from May 2018 to May 2019.

- ✓ Reform making it easier to do business
- × Change making it more difficult to do business

Albania

✓ Getting electricity

Albania increased the reliability of power supply by rolling out a Supervisory Control and Data Acquisition (SCADA) automatic energy management system for the monitoring of outages and the restoration of service.

Reforms affecting the employing workers indicators are included here but do not affect the ranking on the ease of doing business. For reforms in paying taxes, when an economy introduces a value added tax or sales tax, the reform is classified as a neutral reform even though this type of reform increases the administrative burden on firms. The reforms in paying taxes included in *Doing Business* 2020 are those implemented in calendar year 2018 (January 1, 2018 to December 31, 2018).

Antigua and Barbuda

✓ Starting a business

Antigua and Barbuda made starting a business faster by improving the exchange of information between public entities involved in company incorporation.

Argentina

× Starting a business

Argentina made starting a business more difficult by introducing an additional procedure for legalizing the employee books for companies hiring more than 10 employees.

✓ Dealing with construction permits

Argentina made dealing with construction permits easier by streamlining procedures and implementing an electronic platform for building permit applications.

✓ Trading across borders

Argentina reduced the time required for export and import documentary compliance by introducing electronic certificates of origin and improving its import licensing system.

✓ Enforcing contracts

Argentina made enforcing contracts easier by allowing electronic payment of court fees.

Armenia

✓ Dealing with construction permits

Armenia strengthened construction quality control by imposing stricter qualification requirements for architects and engineers.

✓ Protecting minority investors

Armenia strengthened minority investor protections by requiring an independent review and immediate disclosure to the public of related-party transactions, increasing shareholders' rights and role in major corporate decisions, and clarifying ownership and control structures.

✓ Paying taxes

Armenia made paying taxes easier by extending value added tax cash refunds to cases of capital investment.

✓ Trading across borders

Armenia made exporting faster by allowing the online submission of customs declarations.

Australia

✓ Getting credit

Australia improved access to credit information by beginning to distribute both positive and negative data.

Austria

Employing workers

Austria changed regulations pertaining to working time.

Azerbaijan

✓ Registering property

Azerbaijan made registering property easier and more transparent by increasing the coverage of its cadaster and digitizing cadastral plans. Azerbaijan also made property transfer more difficult by making it mandatory to deposit funds into the notary deposit account.

✓ Getting credit

Azerbaijan strengthened access to credit by allowing nonpossessory security interests in one category of movable assets without any restrictions on the use of inventory, including future assets extending automatically to products, proceeds, and replacements of the original collateral. Azerbaijan also allowed the general description of debts and obligations as well as out-of-court enforcement of security interests.

✓ Protecting minority investors

Azerbaijan strengthened minority investor protections by imposing liability on directors for unfair related-party transactions.

× Paying taxes

Azerbaijan made paying taxes more difficult by adding a new labor contribution.

✓ Enforcing contracts

Azerbaijan made enforcing contracts easier by introducing an e-system that allows plaintiffs to file the initial complaint electronically and by adopting a consolidated law on voluntary mediation.

Bahamas, The

✓ Starting a business

The Bahamas made starting a business faster by reducing the registration time for the business license and value added tax and by eliminating the business registration fee.

✓ Getting electricity

The Bahamas made getting electricity more transparent by publishing electricity tariffs online.

× Registering property

The Bahamas made property registration more costly by increasing the stamp duty on property transfers.

✓ Protecting minority investors

The Bahamas strengthened minority investor protections by increasing disclosure requirements for conflicts of interest, clarifying ownership and control structures, and requiring greater corporate transparency.

✓ Paying taxes

The Bahamas made paying taxes easier by enhancing the online value added tax reporting system and making it more accessible to taxpayers.

Bahrain

✓ Dealing with construction permits

Bahrain made obtaining construction permits easier by further streamlining the application process through the new Benayat online platform, and by delegating the application review process to licensed engineering firms.

✓ Getting electricity

Bahrain made the process of getting electricity easier by investing in digitization and transparency of information and by improving its inspection and installation process.

✓ Registering property

Bahrain made property registration easier by streamlining administrative procedures and improving the quality of the land administration system.

✓ Getting credit

Bahrain strengthened access to credit by giving secured creditors absolute priority during insolvency proceedings. During reorganization proceedings, creditors are also now subject to an automatic stay that is limited in time with clear grounds for relief.

✓ Paying taxes

Bahrain made paying taxes easier by implementing electronic payment of social insurance contributions.

✓ Protecting minority investors

Bahrain strengthened minority investor protections by clarifying ownership and control structures.

✓ Trading across borders

Bahrain made exporting faster by deploying new scanners.

✓ Enforcing contracts

Bahrain made enforcing contracts easier by creating a specialized commercial court, establishing time standards for key court events, and allowing electronic service of the summons.

✓ Resolving insolvency

Bahrain made resolving insolvency easier by introducing a reorganization procedure, allowing debtors to initiate the reorganization procedure, adding provisions on postcommencement financing, and improving voting arrangements.

Bangladesh

✓ Starting a business

Bangladesh made starting a business less expensive by reducing name dearance and registration fees and abolishing the fee for certifying digital certificates. This reform applies to both Dhaka and Chittagong.

✓ Getting electricity

Bangladesh made getting electricity faster by investing in digitization and human capital at the utility. Bangladesh also made getting electricity less costly by reducing the amount of the security deposit for a new connection. This reform applies to Dhaka.

✓ Getting credit

Bangladesh improved access to credit information by expanding the coverage of the credit information bureau.

Barbados

✓ Getting electricity

Barbados made getting electricity faster by deploying new software to process applications, increasing the stock of material needed for external connection works, and offering training programs to the utility's engineers.

× Registering property

Barbados made transferring property more difficult by increasing the time to record the conveyance at the Land Registry and pay transfer fees and stamp duties.

✓ Trading across borders

Barbados made trading across borders easier by streamlining inspections by port authorities and introducing an electronic system for documentary compliance. Barbados made trading across borders more expensive by increasing certificate of origin issuance fees.

✓ Enforcing contracts

Barbados made enforcing contracts easier by adopting a law that regulates all aspects of mediation as an alternative dispute resolution mechanism.

Belarus

× Protecting minority investors

Belarus weakened minority investor protections by increasing the time for a joint-stock company to disclose a related-party transaction to the public, the regulator, or the stock exchange.

Belgium

✓ Starting a business

Belgium made starting a business easier by eliminating the paid-in minimum capital requirement.

✓ Paying taxes

Belgium made paying taxes less costly by reducing the corporate income tax rate, increasing the notional interest deduction rate, and decreasing the rates for social security contributions paid by employers.

Belize

✓ Getting electricity

Belize made getting electricity faster by offering training to its utility field engineers and upgrading its geographic information system to map the electricity distribution network.

✓ Trading across borders

Belize made trading across borders easier by enhancing its risk-based management system.

Benin

✓ Registering property

Benin improved the reliability and transparency of the land administration system by publishing official statistics on land transactions and land disputes for the previous calendar year and committing to deliver a legally binding document within a specific time frame.

Brazil

✓ Starting a business

Brazil made starting a business easier by making business registration faster and by decreasing the cost of the digital certificate. This reform applies to both São Paulo and Rio de Janeiro.

✓ Registering property

Brazil made property registration easier by improving the quality of the land administration system. This reform applies to both São Paulo and Rio de Janeiro. Brazil (São Paulo) also introduced online payment and Brazil (Rio de Janeiro) created an online system to obtain property certificates.

Brunei Darussalam

✓ Enforcing contracts

Brunei Darussalam made enforcing contracts easier by publishing performance measurement reports.

✓ Resolving insolvency

Brunei Darussalam made resolving insolvency easier by increasing the participation of creditors in insolvency proceedings.

Cabo Verde

✓ Starting a business

Cabo Verde made starting a business faster by issuing municipal licenses before conducting an inspection.

✓ Dealing with construction permits

Cabo Verde made dealing with construction permits easier by investing in georeferencing and its geographic information system database.

✓ Getting electricity

Cabo Verde made getting electricity easier by having the utility company obtain municipal excavation permits on behalf of customers, at a reduced cost.

✓ Registering property

Cabo Verde made property registration faster by streamlining administrative procedures and improving the quality of the land administration system.

Cambodia

× Starting a business

Cambodia made starting a business more expensive by increasing the costs associated with business registration at the Ministry of Labor and Vocational Training.

Cameroon

✓ Getting credit

Cameroon improved access to credit information by establishing a framework through the Central African Economic and Monetary Community for the licensing and operation of credit bureaus.

Central African Republic

✓ Getting credit

The Central African Republic improved access to credit information by establishing a framework through the Central African Economic and Monetary Community for the licensing and operation of credit bureaus.

Chad

✓ Registering property

Chad made property registration faster by reducing the time needed to transfer property.

✓ Getting credit

Chad improved access to credit information by establishing a framework through the Central African Economic and Monetary Community for the licensing and operation of credit bureaus.

Chile

✓ Starting a business

Chile made starting a business easier by enabling online registration of closed corporations.

China

✓ Starting a business

China (Beijing) made starting a business easier by fully integrating the obtention of company seals into the one-stop shop.

✓ Dealing with construction permits

China made obtaining building permits easier by simplifying the requirements for low-risk construction projects and by reducing the time to get water and drainage connections. China also made construction safer by imposing stricter qualification requirements for professionals in charge of technical inspections and verifying architectural plans as well as differentiated building quality supervision schemes. This reform applies to both Beijing and Shanghai.

✓ Getting electricity

China made getting electricity easier by streamlining the application process. China also increased the transparency of electricity tariff changes. This reform applies to both Beijing and Shanghai.

✓ Protecting minority investors

China strengthened minority investor protections by imposing liability on controlling shareholders for unfair related-party transactions and clarifying ownership and control structures. This reform applies to both Beijing and Shanghai.

✓ Paying taxes

China made paying taxes easier by implementing a preferential corporate income tax rate for small enterprises, reducing the value added tax rate for certain industries, and enhancing the electronic filing and payment system. This reform applies to both Beijing and Shanghai.

✓ Trading across borders

China made exporting and importing easier by implementing advance cargo declaration, upgrading port infrastructure, optimizing customs administration, and publishing fee schedules. This reform applies to both Beijing and Shanghai.

✓ Enforcing contracts

China made enforcing contracts easier by regulating the maximum number of adjournments that can be granted and limiting adjournments to unforeseen and exceptional circumstances. This reform applies to both Beijing and Shanghai. China (Shanghai) made enforcing contracts easier by publishing court performance measurement and progress reports.

✓ Resolving insolvency

China made resolving insolvency easier by providing rules for postcommencement credit priority and increasing the participation of creditors in insolvency proceedings. This reform applies to both Beijing and Shanghai.

Colombia

✓ Starting a business

Colombia made starting a business easier by removing the requirement of opening a bank account to obtain the invoice authorization.

✓ Trading across borders

Colombia made trading across borders easier by digitizing the responsibility card, one of its required export documents.

✓ Resolving insolvency

Colombia made resolving insolvency easier by increasing the participation of creditors in insolvency proceedings.

Congo, Dem. Rep.

✓ Starting a business

The Democratic Republic of Congo made starting a business less expensive by reducing the fees for business incorporation.

✓ Dealing with construction permits

The Democratic Republic of Congo made dealing with construction permits safer by requiring that professionals in charge of plan revisions and inspections be members of the newly created National Order of Architects and National Order of Engineers, and by introducing legislation enforcing inspections during construction.

✓ Paying taxes

The Democratic Republic of Congo made paying taxes less costly by lowering the corporate income tax rate to 30% (from 35%).

Congo, Rep.

✓ Getting credit

The Republic of Congo improved access to credit information by establishing a framework through the Central African Economic and Monetary Community for the licensing and operation of credit bureaus.

Costa Rica

✓ Getting electricity

Costa Rica improved the reliability of electricity supply by repairing the El Porvenir substation, installing 1,140 new poles, and implementing a mapping program for transformers and meters throughout San José. Costa Rica also made getting electricity faster by reducing the time to approve the electrical design.

✓ Enforcing contracts

Costa Rica made enforcing contracts easier by adopting a new code of civil procedure that introduced pretrial conferences as part of the case management techniques in court.

Côte d'Ivoire

✓ Paying taxes

Côte d'Ivoire made paying taxes easier by implementing an electronic filing and payment system, and by introducing an online case management system to process value added tax cash refunds.

✓ Enforcing contracts

Côte d'Ivoire made enforcing contracts easier by publishing reports on commercial court performance and progress of cases.

Croatia

✓ Starting a business

Croatia made starting a business easier by abolishing the requirements to reserve the company name and obtain director signatures for company registration, and by reducing the paid-in minimum capital requirement.

✓ Dealing with construction permits

Croatia made dealing with construction permits less costly by reducing the water contribution for building a warehouse.

✓ Registering property

Croatia made it easier to transfer property by decreasing the real estate transfer tax and by reducing the time to register property title transfers.

× Getting credit

Croatia made accessing credit information more difficult by ending the distribution of individual credit data.

Cyprus

✓ Starting a business

Cyprus made starting a business less expensive by reducing the cost to register a company.

✓ Paying taxes

Cyprus made paying taxes easier by implementing an online system for filing and paying mandatory labor contributions.

Denmark

✓ Dealing with construction permits

Denmark made dealing with construction permits cheaper by eliminating fees for building permits.

Djibouti

✓ Getting credit

Djibouti strengthened access to credit by implementing a functional secured transactions system and a unified notice-based collateral registry.

✓ Protecting minority investors

Djibouti strengthened minority investor protections by increasing corporate transparency.

✓ Resolving insolvency

Djibouti made resolving insolvency easier by facilitating the commencement of proceedings and increasing the effectiveness of court processes.

Employing workers

Djibouti introduced a minimum wage of 35,000 francs (\$198) per month.

Dominican Republic

✓ Starting a business

The Dominican Republic made starting a business easier by reducing the minimum capital requirement.

✓ Enforcing contracts

The Dominican Republic made enforcing contracts easier by establishing specialized commercial court divisions and by adopting a framework for mediation and conciliation, including in commercial cases.

Ecuador

✓ Registering property

Ecuador made registering property easier by reducing the time required to transfer property and by increasing the transparency of the land administration system.

Egypt, Arab Rep.

✓ Starting a business

The Arab Republic of Egypt made starting a business easier by abolishing the requirement to obtain a certificate of nonconfusion and improving its one-stop shop.

✓ Getting electricity

Egypt improved the reliability of electricity supply by implementing automated systems to monitor and report power outages.

✓ Protecting minority investors

Egypt strengthened minority investor protections by requiring shareholder approval when listed companies issue new shares.

✓ Paying taxes

Egypt made paying taxes easier by implementing an online system for filing and payment of corporate income tax and value added tax.

El Salvador

✓ Getting electricity

El Salvador made getting electricity easier by accepting electrical plans at the same time as connection requests.

Equatorial Guinea

✓ Starting a business

Equatorial Guinea made starting a business less expensive by reducing registration fees.

✓ Getting credit

Equatorial Guinea improved access to credit information by establishing a framework through the Central African Economic and Monetary Community for the licensing and operation of credit bureaus.

Eswatini

✓ Starting a business

Eswatini made starting a business easier by introducing free online services for name reservation and business registration.

✓ Dealing with construction permits

Eswatini increased the transparency of dealing with construction permits by publishing—online and free of charge—regulations related to construction.

✓ Getting electricity

Eswatini made getting electricity faster by increasing the availability of materials for external connections works.

✓ Registering property

Eswatini improved the quality of its land administration system by publishing the fee schedule, official service standards, and court statistics on land disputes for the previous calendar year. Eswatini also made property registration more expensive by increasing the stamp duty for property transfers.

Ethiopia

✓ Dealing with construction permits

Ethiopia improved building quality control by mandating a final inspection once construction is completed and strengthening qualification requirements for construction professionals.

✓ Registering property

Ethiopia improved the quality of its land administration system by publishing the official list of documents required for property registration as well as statistics on the number of transactions for the previous calendar year and the service standard for delivering a legally binding document.

Finland

✓ Starting a business

Finland made starting a business easier by reducing the fee and processing time of online business registrations.

Gabon

✓ Starting a business

Gabon made starting a business easier by introducing a fast-track business registration process at the one-stop shop.

✓ Dealing with construction permits

Gabon made dealing with construction permits safer by requiring inspections during the construction phase and by appointing a specialized team to conduct final inspections. Gabon also made the process easier by no longer requiring municipal stamps to apply for the permit.

✓ Getting credit

Gabon improved access to credit information by establishing a framework through the Central African Economic and Monetary Community for the licensing and operation of credit bureaus.

Gambia, The

✓ Starting a business

The Gambia made starting a business easier by eliminating the requirement to obtain a company seal.

✓ Paying taxes

The Gambia made paying taxes less costly by decreasing the corporate income tax rate and the turnover tax rate.

Georgia

✓ Dealing with construction permits

Georgia improved its building quality control by increasing public access to information.

Germany

✓ Enforcing contracts

Germany made enforcing contracts easier by introducing electronic filing of the initial complaint and electronic service of process without the need for paper documents.

Ghana

✓ Getting electricity

Ghana made getting electricity faster by improving the review process and increasing the availability of equipment for new electricity connections.

× Paying taxes

Ghana made paying taxes more complicated and more costly by converting a portion of the recoverable value added tax into two new levies that are a cost to the firm: the Ghana Education Trust Fund and the National Health Insurance Levy.

Greece

✓ Starting a business

Greece made starting a business easier by reducing the time to register a company with the commercial registry and removing the requirement to obtain a tax clearance.

✓ Protecting minority investors

Greece strengthened minority investor protections by requiring greater disclosure and an independent review before the approval of related-party transactions as well as greater corporate transparency of executive compensation.

Grenada

✓ Starting a business

Grenada made starting a business easier by introducing online name search.

Guinea

✓ Starting a business

Guinea made starting a business less expensive by reducing the fees for business incorporation.

✓ Registering property

Guinea made property registration less costly by reducing the property transfer registration fee.

× Paying taxes

Guinea made paying taxes more costly by increasing the minimum flat tax (impôt minimum forfaitaire) paid by large companies. At the same time, Guinea made paying taxes less costly by reducing the corporate income tax rate and the minimum flat tax rate paid by small and medium-size companies.

Guyana

× Trading across borders

Guyana made trading across borders more expensive by increasing the fees for mandatory inspection through scanners for exports, thereby increasing the cost of export border compliance.

Haiti

✓ Getting credit

Haiti improved access to credit information by expanding the coverage of the credit bureau.

Honduras

✓ Starting a business

Honduras made starting a business less expensive by reducing the notary fees for the preparation of the articles of incorporation.

Hong Kong SAR, China

✓ Dealing with construction permits

Hong Kong SAR, China, made dealing with construction permits easier by enhancing its risk-based approach to inspections.

Hungary

✓ Paying taxes

Hungary made paying taxes easier by upgrading the internal electronic tax system. Hungary also made paying taxes less costly by reducing the social tax rate paid by the employer.

Employing workers

Hungary changed regulations pertaining to overtime work.

India

✓ Starting a business

India made starting a business easier by abolishing filing fees for the SPICe company incorporation form, electronic memorandum of association, and articles of association. This reform applies to both Delhi and Mumbai.

✓ Dealing with construction permits

India (Delhi) streamlined the process, reduced the time and cost of obtaining construction permits, and improved building quality control by strengthening professional certification requirements. India (Mumbai) streamlined the process of obtaining a building permit and made it faster and less expensive to get a construction permit.

✓ Trading across borders

India made trading across borders easier by enabling postclearance audits, integrating trade stakeholders in a single electronic platform, upgrading port infrastructures, and enhancing the electronic submission of documents. This reform applies to both Delhi and Mumbai.

✓ Resolving insolvency

India made resolving insolvency easier by promoting reorganization proceedings in practice. India also made resolving insolvency more difficult by not allowing dissenting creditors to receive as much under reorganization as they would receive in liquidation. This reform applies to both Delhi and Mumbai.

Indonesia

✓ Starting a business

Indonesia (Jakarta) made starting a business easier by introducing an online platform for business licensing and replacing hard copies with electronic certificates.

✓ Getting electricity

Indonesia (Surabaya) improved the reliability of power supply following renovations to and enhanced maintenance of its electrical grid. Indonesia (Surabaya) also made obtaining new electrical connections faster thanks to higher generation capacity.

✓ Paying taxes

Indonesia made paying taxes easier by implementing an online filing and payment system for the major taxes. This reform applies to both Jakarta and Surabaya.

✓ Trading across borders

Indonesia made trading across borders easier by improving the online processing of export customs declarations. This reform applies to both Jakarta and Surabaya.

✓ Enforcing contracts

Indonesia made enforcing contracts easier by introducing an electronic case management system for judges. This reform applies to both Jakarta and Surabaya.

Iran, Islamic Rep.

× Registering property

The Islamic Republic of Iran made transferring property more expensive by increasing the average taxable land value in Tehran City.

Israel

✓ Starting a business

Israel made starting a business easier by allowing joint registration of corporate tax and value added tax.

✓ Getting credit

Israel improved access to credit information by reporting both positive and negative data on individual borrowers.

✓ Paying taxes

Israel made paying taxes easier by implementing an electronic system for filing and paying value added tax and social security contributions. Israel made paying taxes less costly by reducing the corporate income tax rate.

✓ Trading across borders

Israel made exporting easier by eliminating the certificate of origin requirement, thereby decreasing the time and cost of export documentary compliance.

Italy

Employing workers

Italy changed regulations pertaining to fixed-term contracts.

Jamaica

✓ Registering property

Jamaica made property registration easier by reducing the property transfer tax and stamp duty.

✓ Enforcing contracts

Jamaica made enforcing contracts easier by introducing a judicial performance measurement mechanism that provides publicly available information on time to disposition and clearance rate.

Jordan

✓ Getting credit

Jordan strengthened access to credit by introducing a new secured transactions law, amending the insolvency law, and launching a unified, modern, and notice-based collateral registry. The secured transactions law broadened the description of debts and obligations and the scope of assets usable as collateral. The amended insolvency law grants secured creditors absolute priority and provides a time limit and clear grounds for relief from automatic stays during reorganization procedures. Jordan also improved access to credit information by providing credit scores to banks, financial institutions, and borrowers.

✓ Paying taxes

Jordan made paying taxes easier by implementing electronic filing and payment for labor taxes and other mandatory contributions.

✓ Resolving insolvency

Jordan made resolving insolvency easier by introducing a reorganization procedure, by allowing debtors to initiate the reorganization procedure, and by improving the continuation of businesses and the treatment of contracts during insolvency proceedings.

Kazakhstan

✓ Starting a business

Kazakhstan made starting a business easier by registering companies for value added tax at the time of incorporation.

✓ Dealing with construction permits

Kazakhstan made dealing with construction permits easier by streamlining the expert evaluation of the construction project and by improving the process for obtaining a new water connection.

× Registering property

Kazakhstan made registering property cheaper by decreasing registration fees. Kazakhstan also made transferring property more difficult by requiring additional proof of payment of state duties.

✓ Getting credit

Kazakhstan strengthened access to credit by automatically extending security interests to the products, proceeds, and replacements of the original assets and by giving secured creditors absolute priority during insolvency proceedings. Kazakhstan also improved access to credit information by reporting credit data from retailers.

× Resolving insolvency

Kazakhstan made resolving insolvency more difficult by requiring that all creditors vote on the rehabilitation plan, regardless of its impact on their interests.

Kenya

✓ Dealing with construction permits

Kenya made dealing with construction permits more transparent by making building permit requirements publicly available online, and by reducing fees.

✓ Getting electricity

Kenya improved the reliability of electricity supply by modernizing its existing infrastructure and by inaugurating a new substation in Nairobi.

× Registering property

Kenya made property registration more difficult because of an additional payment slip generation and increased online consent application and title search fees. At the same time, property registration was made faster by moving consents to transfer and payment verification online.

✓ Getting credit

Kenya strengthened access to credit by introducing online registration, modification and cancellation of security interests, and public online searches of its collateral registry.

✓ Protecting minority investors

Kenya strengthened minority investor protections by requiring shareholders to approve the election and dismissal of an external auditor.

✓ Paying taxes

Kenya made paying taxes easier by implementing an online filing and payment system for social security contributions.

✓ Resolving insolvency

Kenya made resolving insolvency easier by improving the continuation of the debtor's business during insolvency proceedings.

Korea, Rep.

✓ Paying taxes

The Republic of Korea made paying taxes easier by introducing additional features to its online filing system for corporate income tax and value added tax.

Kosovo

✓ Dealing with construction permits

Kosovo made dealing with construction permits easier by eliminating the requirement to notify the municipal authority of the start of construction and receive a location inspection.

✓ Getting electricity

Kosovo improved the reliability of power supply by investing in grid infrastructure and by implementing a Supervisory Control and Data Acquisition (SCADA) automatic energy management system for outage monitoring and the restoration of service.

✓ Protecting minority investors

Kosovo strengthened minority investor protections by requiring greater disclosure of transactions with interested parties, extending access to corporate information before trial, clarifying ownership and control structures, and requiring greater corporate transparency.

✓ Enforcing contracts

Kosovo made enforcing contracts easier by introducing a consolidated law on voluntary mediation.

Kuwait

✓ Starting a business

Kuwait made starting a business easier by merging procedures to obtain a commercial license and streamlining online company registration.

✓ Dealing with construction permits

Kuwait made dealing with construction permits easier by streamlining its permitting process, integrating additional authorities to its electronic permitting platform, enhancing interagency communication, and reducing the time to obtain a construction permit.

✓ Getting electricity

Kuwait made getting electricity easier by digitizing the application process, streamlining connection works and meter installations, and using a geographic information system to review connection requests.

✓ Registering property

Kuwait made property registration easier by streamlining the inspection and registration processes. Kuwait also improved the quality of its land administration system by publishing official service standards on property transfers.

✓ Getting credit

Kuwait improved access to credit information by guaranteeing borrowers the legal right to inspect their credit data and offering credit scores as a value-added service to banks and financial institutions.

✓ Protecting minority investors

Kuwait strengthened minority investor protections by providing a 21-day notice for general assembly meetings.

✓ Trading across borders

Kuwait made trading across borders easier by improving the customs risk management system and by implementing a new electronic clearance system.

Kyrgyz Republic

✓ Getting electricity

The Kyrgyz Republic improved the reliability of power supply by enhancing the monitoring of outages and modernizing its infrastructure to reduce power outages.

✓ Getting credit

The Kyrgyz Republic improved access to credit information by providing credit scores to banks, financial institutions, and borrowers.

✓ Paying taxes

The Kyrgyz Republic made paying taxes easier by consolidating the tax on interest income into the corporate income tax and by implementing an online platform for filing and paying taxes.

Lao PDR

✓ Starting a business

The Lao People's Democratic Republic made starting a business easier by eliminating the requirement to obtain proof of business location from the Village Chief Authority for business registration.

✓ Getting electricity

Lao PDR made getting electricity faster by allocating more staff to process applications. Lao PDR also improved the reliability of power supply by deploying an automated Supervisory Control and Data Acquisition (SCADA) system for outage monitoring and the restoration of service.

Latvia

x Paying taxes

Latvia made paying taxes costlier by increasing the effective corporate income tax burden. The new calculations replaced the corporate income tax paid on the taxable profits of companies with an income tax based on distributed profits.

Lebanon

✓ Enforcing contracts

Lebanon made enforcing contracts easier by adopting a law that regulates all aspects of mediation as an alternative dispute resolution mechanism.

Lesotho

✓ Starting a business

Lesotho made starting a business easier by removing the requirement for a health certificate and the inspection of the premises for all businesses.

Liberia

× Paying taxes

Liberia made paying taxes more costly by increasing the employer-paid social security contribution rate.

× Trading across borders

Liberia made trading across borders more expensive by requiring traders to obtain Cargo Tracking Note certificates, thereby increasing the cost of documentary compliance for exports and imports.

Lithuania

✓ Getting electricity

Lithuania made getting electricity easier by launching an integrated digital application and by reducing the cost of new connections.

✓ Protecting minority investors

Lithuania strengthened minority investor protections by clarifying ownership and control structures.

Luxembourg

Employing workers

Luxembourg changed regulations pertaining to paid annual leave.

Madagascar

✓ Enforcing contracts

Madagascar made enforcing contracts easier by publishing performance measurement and progress reports for the commercial court.

Malaysia

✓ Dealing with construction permits

Malaysia streamlined the process of dealing with construction permits by eliminating the road and drainage inspection performed by Kuala Lumpur City Hall.

Mali

× Paying taxes

Mali made paying taxes more difficult by introducing a new tax, the solidarity contribution, which is levied at a rate of 0.5% on the business turnover.

Malta

✓ Starting a business

Malta made starting a business easier by implementing an online one-stop shop for the registration of employers, employees, and value added tax.

✓ Getting electricity

Malta increased the reliability of power supply by upgrading its power grid infrastructure and launching a network planning and operations control center.

Employing workers

Malta changed regulations pertaining to paid annual leave.

Mauritania

✓ Getting credit

Mauritania improved access to credit information by launching a new credit reporting system, distributing both positive and negative data, and offering credit scores to banks and financial institutions.

✓ Enforcing contracts

Mauritania made enforcing contracts easier by introducing a simplified procedure for small claims, setting time standards for key court events, and limiting adjournments. Mauritania also adopted a law that regulates all aspects of mediation as an alternative dispute resolution mechanism.

Mauritius

✓ Dealing with construction permits

Mauritius streamlined the process of dealing with construction permits by simplifying the process of plan approvals from utilities and reducing the time to apply for wastewater connection.

✓ Registering property

Mauritius made property registration faster by making it easier to check for encumbrances. Mauritius also improved the quality of its land administration system by publishing official service standards and court statistics on land disputes.

✓ Enforcing contracts

Mauritius made enforcing contracts easier by publishing performance measurement reports for the commercial division of the Supreme Court.

✓ Resolving insolvency

Mauritius made resolving insolvency easier by improving the continuation of the debtor's business during insolvency proceedings.

Mexico

× Dealing with construction permits

Mexico (Mexico City) made dealing with construction permits more difficult by increasing the fees for obtaining a building permit.

Moldova

✓ Dealing with construction permits

Moldova made dealing with construction permits easier by enabling quality control by supervising engineers and by no longer requiring clearances from health and environmental agencies for low-risk structures.

✓ Paying taxes

Moldova made paying taxes easier by reducing the social security contribution rate paid by the employer and the capital gains basis. At the same time, the value of the environmental tax and the time for labor taxes and contributions increased.

✓ Enforcing contracts

Moldova made enforcing contracts easier by amending the code of civil procedure to establish a simplified procedure for small claims.

Morocco

✓ Dealing with construction permits

Morocco made dealing with construction permits easier by improving its online platform and further streamlining the process, making it possible to apply for and obtain certificates of conformity online.

✓ Getting electricity

Morocco made getting electricity easier by generalizing online applications for new connections and expanding the use of prebuilt transformers.

× Registering property

Morocco made property registration less transparent by not publishing statistics on the number of property transactions and land disputes for the previous calendar year. Morocco also made property registration faster by reducing the time to obtain a nonencumbrance certificate.

✓ Protecting minority investors

Morocco strengthened minority investor protections by expanding shareholders' role in major transactions, promoting independent directors, increasing transparency on directors' employment in other companies, and making it easier to request general meetings.

✓ Paying taxes

Morocco made paying taxes less costly by reducing the corporate income tax rate.

✓ Trading across borders

Morocco made trading across borders faster by introducing e-payment of port fees, streamlining paperless customs clearance, and extending port hours of operation.

✓ Enforcing contracts

Morocco made enforcing contracts easier by introducing an automated system that randomly assigns cases to judges and by publishing court measurement performance reports.

Myanmar

✓ Starting a business

Myanmar made starting a business easier by introducing an online platform for company registration and by reducing incorporation fees.

✓ Dealing with construction permits

Myanmar strengthened construction quality control by imposing stricter qualification requirements for architects and engineers and making building permitting requirements available online. Myanmar also improved its water and sanitation infrastructure and made the building permitting process more efficient by introducing service quality standards.

✓ Registering property

Myanmar made property registration faster by streamlining deed registration and appraisal. Myanmar also improved the quality of its land administration system by publishing the fee schedule, official service standards, and statistics on property transfers for the previous calendar year.

✓ Protecting minority investors

Myanmar strengthened minority investor protections by requiring greater disclosure of transactions with interested parties, increasing director liability, and requiring greater corporate transparency.

✓ Enforcing contracts

Myanmar made enforcing contracts easier by publishing performance measurement reports.

Nepal

× Starting a business

Nepal made starting a business more difficult by requiring in-person follow-up for employee registration for social security.

✓ Dealing with construction permits

Nepal made dealing with construction permits easier and less costly by reducing fees for building permits and improving the online e-submissions platform.

× Registering property

Nepal made property registration more expensive by increasing the property transfer registration fee. Nepal also improved the quality of its land administration system by publishing official service standards for delivering updated cadastral maps.

✓ Getting credit

Nepal improved access to credit information by expanding the coverage of the credit bureau.

✓ Trading across borders

Nepal reduced the time and cost to export and the time to import by opening the Integrated Check Post Birgunj at the Nepal-India border.

✓ Enforcing contracts

Nepal made enforcing contracts easier by adopting a new code of civil procedure that introduces time standards for key court events.

Niger

✓ Getting credit

Niger improved access to credit information by expanding the coverage of the credit bureau and beginning to distribute data from utility companies.

Nigeria

✓ Starting a business

Nigeria made starting a business easier by reducing the time needed to register a company and by improving online platforms. This reform applies to both Kano and Lagos. Nigeria (Kano) also made starting a business easier by no longer requiring on-site inspections for business premises registration.

✓ Dealing with construction permits

Nigeria (Lagos) made dealing with construction permits less costly by eliminating the Infrastructure Development Charge (IDC, the fee for construction permits) for warehouses.

✓ Getting electricity

Nigeria made getting electricity easier by allowing certified engineers to conduct inspections for new connections. This reform applies to both Kano and Lagos.

✓ Registering property

Nigeria (Lagos) improved its land administration system by implementing a geographic information system.

✓ Trading across borders

Nigeria reduced the time to export and import by further upgrading its electronic system and by launching e-payment of fees. This reform applies to both Kano and Lagos.

✓ Enforcing contracts

Nigeria made enforcing contracts easier by introducing a pretrial conference as part of the case management techniques used in court. This reform applies to both Kano and Lagos. Nigeria (Kano) also made enforcing contracts easier by issuing new rules of civil procedure for small claims courts, which limit adjournments to unforeseen and exceptional circumstances.

North Macedonia

✓ Enforcing contracts

North Macedonia made enforcing contracts easier by simplifying the calculation of enforcement fees as well as making the overall process less costly.

Employing workers

North Macedonia changed its labor regulations on probationary period, priority rules during redundancy dismissals and reemployment, and severance payments.

Oman

✓ Getting electricity

Oman made getting electricity faster by investing in prepaid meters and enforcing service delivery time frames.

✓ Registering property

Oman made registering property faster by reducing the time to issue deeds and improved its land administration system by publishing official service standards on property transfers.

✓ Protecting minority investors

Oman strengthened minority investor protections by increasing shareholder rights as well as clarifying ownership and control structures.

✓ Trading across borders

Oman made importing and exporting faster by upgrading infrastructure at the Sohar Port as well as introducing risk-based inspections and postclearance audits.

Pakistan

✓ Starting a business

Pakistan made starting a business easier by expanding procedures available through the online one-stop shop. This reform applies to both Karachi and Lahore. Furthermore, Pakistan (Lahore) abolished the Labor Department registration fee.

✓ Dealing with construction permits

Pakistan (Karachi) made obtaining a construction permit easier and faster by streamlining the approval process and also made construction safer by ensuring that building quality inspections take place regularly. Pakistan (Lahore) also made obtaining a construction permit easier and faster by streamlining the approval process and by improving the operational efficiency of its one-stop shop for construction permitting.

✓ Getting electricity

Pakistan made getting electricity easier by enforcing service delivery time frames and by launching an online portal for new applications. Pakistan also increased the transparency of electricity tariff changes. This reform applies to both Karachi and Lahore.

✓ Registering property

Pakistan (Karachi) made property registration faster by making it easier to execute and register a deed at the Office of the Sub-Registrar. Pakistan (Lahore) made registering property easier by increasing the transparency of the land administration system.

✓ Paying taxes

Pakistan made paying taxes easier by introducing online payment modules for value added tax and corporate income tax, and less costly by reducing the corporate income tax rate. This reform applies to both Karachi and Lahore.

✓ Trading across borders

Pakistan made trading across borders easier by enhancing the integration of various agencies in the Web-Based One Customs (WEBOC) electronic system and coordinating joint physical inspections at the port. This reform applies to both Karachi and Lahore.

Papua New Guinea

✓ Paying taxes

Papua New Guinea made paying taxes less costly by abolishing the training levy. Papua New Guinea made paying taxes easier by issuing value added tax refunds more quickly thanks to more streamlined audits.

✓ Trading across borders

Papua New Guinea made trading across borders easier by implementing an automated customs data management system. At the same time, Papua New Guinea made trading across borders more expensive by increasing port fees.

Paraguay

✓ Enforcing contracts

Paraguay made enforcing contracts easier by introducing an electronic case management system for judges and lawyers.

Peru

✓ Trading across borders

Peru reduced the time to export and import by introducing electronic mandates for customs brokers and by streamlining import customs clearances.

Philippines

✓ Starting a business

The Philippines made starting a business easier by abolishing the minimum capital requirement for domestic companies.

✓ Dealing with construction permits

The Philippines made dealing with construction permits easier by improving coordination and streamlining the process for obtaining an occupancy certificate.

✓ Protecting minority investors

The Philippines strengthened minority investor protections by requiring greater disclosure of transactions with interested parties and enhancing director liability for transactions with interested parties.

Poland

✓ Getting electricity

Poland made getting electricity faster by implementing a new customer service platform that allows the utility to better track applications for new commercial connections.

× Registering property

Poland made transferring property more difficult by increasing the time needed to apply for registration at the Land and Mortgage Registry.

Gatar

✓ Getting electricity

Qatar made getting electricity faster by reducing the time for processing online applications for a new connection.

✓ Registering property

Qatar made property registration easier by streamlining property registration procedures. Qatar also improved the quality of its land administration system by publishing official service standards on property transfers and court statistics on land disputes for the previous calendar year.

✓ Getting credit

Qatar improved access to credit information by reporting credit data from a telecommunications company.

Romania

✓ Starting a business

Romania made starting a business easier by allowing voluntary value added tax registration, which is less time consuming than mandatory registration.

✓ Paying taxes

Romania made paying taxes less costly by eliminating five employer-paid taxes and contributions. At the same time, Romania introduced a new work insurance contribution paid by the employer.

Russian Federation

✓ Getting electricity

The Russian Federation made getting electricity faster by setting new deadlines and establishing specialized departments for connection works within the utilities of Moscow and St. Petersburg.

✓ Protecting minority investors

Russia strengthened minority investor protections by requiring greater corporate transparency. This reform applies to both Moscow and St. Petersburg.

✓ Paying taxes

Russia made paying taxes easier by reducing the tax authority review period of taxpayer applications for value added tax cash refunds and by further enhancing the 1C software used for tax and payroll preparation. This reform applies to both Moscow and St. Petersburg.

Rwanda

✓ Starting a business

Rwanda made starting a business easier by exempting newly formed small and medium-size enterprises from paying the trading license tax for their first two years of operation.

✓ Dealing with construction permits

Rwanda made dealing with construction permits faster by reducing the time to obtain a water and sewage connection. Rwanda also improved building quality control by requiring all construction professionals to obtain liability insurance on buildings once in use.

✓ Getting electricity

Rwanda improved the reliability of power supply by upgrading its power grid infrastructure.

Employing workers

Rwanda changed regulations pertaining to weekly rest, working hours, severance payments, and reemployment priority rules after redundancy dismissals.

San Marino

✓ Starting a business

San Marino made starting a business easier by extending the deadline to deposit the paid-in capital.

Saudi Arabia

✓ Starting a business

Saudi Arabia made starting a business easier by establishing a onestop shop that merged several pre- and postregistration procedures. Saudi Arabia also eliminated the requirement for married women to provide additional documents when applying for a national identity card.

✓ Dealing with construction permits

Saudi Arabia made dealing with construction permits easier by launching an online platform and by enabling civil defense approval after the issuance of the building permit.

✓ Getting electricity

Saudi Arabia made getting electricity easier by streamlining connection works and meter installation, by using a geographic information system to review new electrical connection requests, and by no longer requiring certificates of completion.

✓ Getting credit

Saudi Arabia strengthened access to credit by introducing a secured transactions law and an insolvency law. The new laws provide secured creditors with absolute priority inside bankruptcy, allow all types of debts and obligations to be secured between the parties, and allow out-of-court enforcement of security interests.

✓ Protecting minority investors

Saudi Arabia strengthened minority investor protections by increasing access to evidence at trial.

Paying taxes

Saudi Arabia introduced a value added tax.

✓ Trading across borders

Saudi Arabia made importing and exporting easier by enhancing its electronic trade single window, enabling risk-based inspections, launching an online platform for certification of imported goods, and upgrading infrastructure at the Jeddah Port.

✓ Enforcing contracts

Saudi Arabia made enforcing contracts easier by publishing court performance measurement reports and information on the progress of cases through the court.

✓ Resolving insolvency

Saudi Arabia made resolving insolvency easier by introducing a reorganization procedure, allowing debtors to initiate the reorganization procedure, improving voting arrangements in reorganization, improving the continuation of businesses and the treatment of contracts during insolvency proceedings, allowing postcommencement credit, and increasing the participation of creditors in the insolvency proceedings.

Senegal

✓ Getting credit

Senegal improved access to credit information by expanding the coverage of the credit bureau and offering credit scoring as a value-added service.

✓ Paying taxes

Senegal made paying taxes easier by implementing an electronic filing and payment system and less costly by merging several taxes.

Serbia

× Starting a business

Serbia made starting a business more complicated by requiring that entrepreneurs obtain an electronic certificate and register the ultimate beneficial owners separately after incorporation.

✓ Dealing with construction permits

Serbia made dealing with construction permits easier by implementing a new online portal and by reducing administrative fees.

✓ Getting electricity

Serbia improved the reliability of power supply by reengineering substations, installing remote control systems, and improving grid maintenance.

✓ Protecting minority investors

Serbia strengthened minority investor protections by requiring an external review and immediate disclosure of related-party transactions, clarifying ownership and control structures as well as requiring greater corporate transparency.

✓ Paying taxes

Serbia made paying taxes easier by introducing internal deadlines to refund value added tax credits.

✓ Enforcing contracts

Serbia made enforcing contracts easier by establishing financial incentives for the parties to attempt mediation.

✓ Resolving insolvency

Serbia made resolving insolvency easier by requiring creditors to approve the appointment of the insolvency representative and providing them with the right to information on the financial status of the debtor.

Seychelles

✓ Dealing with construction permits

The Seychelles made dealing with construction permits faster by streamlining internal processes.

Sierra Leone

✓ Trading across borders

Sierra Leone made trading across borders faster by upgrading its customs electronic data interchange system, thereby reducing the time for import documentary compliance.

Singapore

✓ Dealing with construction permits

Singapore made dealing with construction permits easier by enhancing its risk-based approach to inspections, improving public access to soil information, and streamlining the process to obtain a construction permit.

Slovak Republic

✓ Starting a business

The Slovak Republic made starting a business easier by abolishing the requirement to obtain and submit information on tax arrears.

Employing workers

The Slovak Republic increased wage premiums for work performed during days of weekly rest and at night.

South Africa

✓ Enforcing contracts

South Africa made enforcing contracts easier by introducing a specialized court dedicated to hearing commercial cases.

Employing workers

South Africa introduced a national minimum wage.

Spain

✓ Protecting minority investors

Spain strengthened minority investor protections by clarifying ownership and control structures.

St. Kitts and Nevis

✓ Getting credit

St. Kitts and Nevis improved access to credit information through the introduction of regulations that govern the licensing and functioning of credit bureaus in the member states of the East Caribbean Currency Union (ECCU).

St. Vincent and the Grenadines

✓ Paying taxes

St. Vincent and the Grenadines made paying taxes less costly by reducing the corporate income tax rate.

Sudan

× Getting electricity

Sudan decreased the reliability of power supply by not collecting and reporting data on the frequency and duration of power outages as measured by the system average interruption duration index (SAIDI) and system average interruption frequency index (SAIFI) indexes.

x Getting credit

Sudan weakened access to credit by removing provisions that grant priority to secured creditors' claims inside bankruptcy procedures and provide for reorganization procedures.

× Resolving insolvency

Sudan made resolving insolvency more difficult by worsening the treatment of contracts during insolvency proceedings and weakening creditors' rights.

Suriname

Employing workers

Suriname changed regulations pertaining to fixed-term contracts.

Taiwan, China

× Paying taxes

Taiwan, China, made paying taxes costlier by increasing the corporate income tax rate.

Tajikistan

✓ Starting a business

Tajikistan made starting a business easier by registering companies for a Social Identification Number at the time of incorporation.

✓ Getting credit

Tajikistan strengthened access to credit by launching a unified, modern, and notice-based collateral registry; introducing a functional secured transactions system; broadening the scope of assets that can be used as collateral; allowing the general description of debts and obligations; granting secured creditors absolute priority; and providing a time limit and clear grounds for relief from automatic stays during reorganization procedures.

✓ Trading across borders

Tajikistan made exporting faster by prioritizing customs clearance of perishable goods exports.

Thailand

✓ Dealing with construction permits

Thailand made dealing with construction permits easier by introducing legislation requiring phased inspections during construction.

Timor-Leste

x Paying taxes

Timor-Leste made paying taxes costlier by introducing a social security contribution scheme paid by the employer.

Togo

✓ Starting a business

Togo made starting a business easier by abolishing the requirement to notarize company documents and by reducing the time to register a company.

✓ Dealing with construction permits

Togo made dealing with construction permits easier by reducing fees and by adopting an online portal for the submission of applications. Togo made dealing with construction permits more transparent by making the required documents, preapproval, and fees available online. Togo also improved its building quality control by regulating inspections during construction.

✓ Getting electricity

Togo made getting electricity less costly by further reducing the cost of connection works and the security deposit for new connections.

✓ Registering property

Togo made property registration easier by streamlining administrative procedures and reducing costs.

✓ Getting credit

Togo improved access to credit information by expanding the coverage of the credit bureau and beginning to distribute data from utility companies.

Tonga

× Dealing with construction permits

Tonga made dealing with construction permits less transparent by removing online public information on the building code, building fees, and required preapprovals.

Trinidad and Tobago

✓ Paying taxes

Trinidad and Tobago made paying taxes easier by conducting limited scope audits instead of full audits for value added tax refunds.

Tunisia

✓ Starting a business

Tunisia made starting a business easier by merging more services into the one-stop shop and reducing fees.

✓ Registering property

Tunisia made property registration faster by streamlining the internal process to transfer property. Tunisia also increased the transparency of the land administration by publishing statistics tracking property transactions at the Land Registry.

✓ Paying taxes

Tunisia made paying taxes easier by implementing a risk-based tax audit system.

Turkey

✓ Registering property

Turkey made property registration less expensive by temporarily reducing mortar charges to transfer property, and faster by reducing the time to obtain a tax assessment.

✓ Paying taxes

Turkey made paying taxes easier by amending the value added tax code to exempt certain capital investments from value added tax.

Uganda

✓ Getting electricity

Uganda improved the monitoring and regulation of power outages by improving its calculations of the annual system average interruption duration index (SAIDI) and system average interruption frequency index (SAIFI).

Ukraine

✓ Dealing with construction permits

Ukraine streamlined the dealing with construction permits process by eliminating the requirement to hire an external supervisor and introducing an online notification system. Ukraine also made obtaining a construction permit less costly by reducing the contribution fee to the Kyiv City Council.

✓ Getting electricity

Ukraine made getting electricity easier by streamlining the issuance of technical conditions and by implementing a geographic information system. Ukraine also improved the reliability of power supply by introducing an outage compensation mechanism.

✓ Registering property

Ukraine made registering property easier by increasing the transparency of the land administration system.

✓ Getting credit

Ukraine improved access to credit information by establishing a new public credit registry in the National Bank of Ukraine.

✓ Protecting minority investors

Ukraine strengthened minority investor protections by requiring greater disclosure of transactions with interested parties.

✓ Trading across borders

Ukraine reduced the time to import by simplifying conformity certification requirements for auto parts.

United Arab Emirates

✓ Starting a business

The United Arab Emirates made starting a business less expensive by reducing the fees for business incorporation.

✓ Dealing with construction permits

The United Arab Emirates made dealing with construction permits easier by using a risk-based approach to reduce the number of inspections.

✓ Protecting minority investors

The United Arab Emirates increased minority investor protections by providing for disqualification of directors in cases of prejudicial conflicts of interest.

Paying taxes

The United Arab Emirates introduced a value added tax.

✓ Trading across borders

The United Arab Emirates made trading across borders easier by reducing the time to export by fully digitizing certificates of origin and the cost to import by issuing certificates of conformity that cover multiple shipments.

United Kingdom

× Paying taxes

The United Kingdom made paying taxes more difficult by introducing a new pension scheme paid by the employer.

United States

✓ Starting a business

The United States (Los Angeles) made starting a business easier by introducing online filing of the statement of information for limited liability companies.

✓ Paying taxes

The United States made paying taxes less costly by decreasing the corporate income tax rate. This reform applies to both New York City and Los Angeles.

✓ Enforcing contracts

The United States (Los Angeles) made enforcing contracts easier by introducing electronic filing and electronic payment of court fees.

Uruguay

✓ Trading across borders

Uruguay reduced the time required for import documentary compliance by introducing electronic certificates of origin.

Uzbekistan

✓ Protecting minority investors

Uzbekistan strengthened minority investor protections by increasing shareholders' rights and role in major corporate decisions, clarifying ownership and control structures, and requiring greater corporate transparency.

✓ Paying taxes

Uzbekistan made paying taxes easier by merging the infrastructure tax with the corporate income tax.

✓ Trading across borders

Uzbekistan made trading across borders easier by introducing risk-based inspections and simplifying import documentary compliance.

✓ Enforcing contracts

Uzbekistan made enforcing contracts easier by introducing a consolidated law on voluntary mediation, establishing financial incentives for the parties to attempt mediation, and publishing performance measurement reports on local commercial courts.

Vietnam

✓ Getting credit

Vietnam improved access to credit information by distributing data from retailers.

✓ Paying taxes

Vietnam made paying taxes easier by upgrading the information technology infrastructure used by the General Department of Taxation.

Zambia

✓ Protecting minority investors

Zambia strengthened minority investor protections by increasing shareholders' rights and role in major corporate decisions as well as clarifying ownership and control structures.

✓ Resolving insolvency

Zambia made resolving insolvency easier by introducing a reorganization procedure and granting debtors the possibility of obtaining postcommencement finance.

Zimbabwe

✓ Starting a business

Zimbabwe made starting a business easier by improving online name search and by reducing the Harare Municipality business licensing fee.

✓ Dealing with construction permits

Zimbabwe made dealing with construction permits faster by streamlining plan approvals.

✓ Registering property

Zimbabwe made property registration easier by reducing the time to transfer property and increased transparency by publishing official statistics on land disputes for the previous calendar year.

✓ Getting credit

Zimbabwe strengthened access to credit by giving secured creditors absolute priority during insolvency proceedings.

✓ Resolving insolvency

Zimbabwe made resolving insolvency easier by introducing a new reorganization procedure, allowing creditors to vote on the reorganization plan, and granting debtors the possibility of obtaining postcommencement finance.

- Amirapu, Amrit, and Michael Gechter. 2019. "Labor Regulations and the Cost of Corruption: Evidence from the Indian Firm Size Distribution." Review of Economics and Statistics, June 4.
- Andersen, Thomas Barnebeck, and Carl-Johan Dalgaard. 2013. "Power Outages and Economic Growth in Africa." Energy Economics 38 (July): 19–23.
- Asmal, Zaakhir, Haroon Bhorat, Ravi Kanbur, Marco Ranzani, and Pierella Paci. 2018. "Minimum Wages and Labor Supply in an Emerging Market." Policy Research Working Paper 8681, World Bank, Washington, DC.
- Asturias, Jose, Sewon Hur, Timothy J. Kehoe, and Kim Ruhl. 2017. "Firm Entry and Exit and Aggregate Growth." NBER Working Paper 23202, National Bureau of Economic Research, Cambridge, MA.
- Auriol, Emmanuelle. 2006. "Corruption in Procurement and Public Purchase." International Journal of Industrial Organization 24 (5): 867–85.
- Awasthi, Rajul, and Nihal Bayraktar. 2015. "Can Tax Simplification Help Lower Tax Corruption?" Eurasian Economic Review (5) 2: 297–330.
- Bardhan, P. 1997. "Corruption and Development: A Review of Issues." Journal of Economic Literature 35: 1320-46.
- Beck, Thorsten, Chen Lin, and Yue Ma. 2014. "Why Do Firms Evade Taxes? The Role of Information Sharing and Financial Sector Outreach." Journal of Finance 69 (2): 763-817.
- Belitski, Maksim, Farzana Chowdhury, and Sameeksha Desai. 2016. "Taxes, Corruption and Entry." Small Business Economics 47 (1): 201–16.
- Benhassine, Najy, David McKenzie, Victor Pouliquen, and Massimiliano Santini. 2018. "Does Inducing Informal Firms to Formalize Make Sense? Experimental Evidence from Benin." Journal of Public Economics 157 (January): 1–14.
- Berkowitz, Daniel, Chen Lin, and Yue Ma. 2015. "Do Property Rights Matter? Evidence from a Property Law Enactment." Journal of Financial Economics 116 (3): 583-93.
- Bertók, J. 2005. "The Role of Transparency in Preventing Corruption in Public Procurement: Issues for Consideration." In Fighting Corruption and Promoting Integrity in Public Procurement, edited by Organisation for Economic Cooperation and Development (OECD), 45-50. Paris: OECD Publishing.
- Betcherman, Gordon, N. Meltem Daysal, and Carmen Pagés. 2010. "Do Employment Subsidies Work? Evidence from Regionally Targeted Subsidies in Turkey." Labour Economics 17 (4): 710-22.
- Bjuggren, Carl Magnus. 2018. "Employment Protection and Labor Productivity." Journal of Public Economics 157 (January): 138-57.
- Botero, Juan Carlos, Simeon Djankov, Rafael La Porta, Florencio López-de-Silanes, and Andrei Shleifer. 2004. "The Regulation of Labor." Quarterly Journal of Economics 119 (4): 1339-82.
- Bottasso, Anna, Maurizio Conti, and Giovanni Sulis. 2016. "Firm Dynamics and Employment Protection: Evidence from Sectoral Data." Discussion Paper 9740, Institute of Labor Economics IZA, Bonn.
- Braunerhjelm, Pontus, and Johan Eklund. 2014. "Taxes, Tax Administrative Burdens and New Firm Formation." Kyklos 67 (1): 1–11.
- Brown, James R., Gustav Martinsson, and Bruce C. Petersen. 2013. "Law, Stock Markets, and Innovation." The Journal of the American Finance Association 68 (4): 1517-49.
- Calomiris, Charles, Mauricio Larrain, José Liberti, and Jason Sturgess. 2017. "How Collateral Laws Shape Lending and Sectoral Activity." Journal of Financial Economics 123 (1): 163-88.

- Campos, J. Edgardo, and Sanjay Pradhan, eds. 2007. The Many Faces of Corruption: *Tracking Vulnerabilities at the Sector Level*. Washington, DC: World Bank.
- Chakraborty, Pavel. 2016. "Judicial Quality and Regional Firm Performance: The Case of Indian States." Journal of Comparative Economics 44 (4): 902–18.
- Che Azmi, Anna A., and Yusniza Kamarulzaman. 2009. "Adoption of Tax E-filing: A Conceptual Paper." African Journal of Business Management 4 (5): 599-603.
- Chemin, Matthieu. 2018. "Judicial Efficiency and Firm Productivity: Evidence from a World Database of Judicial Reforms." Review of Economics and Statistics, November 2.
- Chidolue, C. A., A. I. Nwajuaku, and V. O. Okonkwo. 2013. "Rehabilitation of Onitsha-Enugu Dual Carriageway in Anambra State, Nigeria: Lessons Learned." Nigerian Journal of Technology (NIJOTECH) 32 (3): 393-402.
- Chong, Uven, and Omar Hopkins. 2016. "An International Experience on the Evolution of Road Costs during the Project Life Cycle." Transport Policy 48: 60-66.
- Choi, Jieun, Mark Dutz, and Zainab Usman. 2019. The Future of Work in Africa: Harnessing the Potential of Digital Technologies for All. World Bank: Washington, DC.
- Claessens, Stijn, Kenichi Ueda, and Yishay Yafeh. 2014. "Institutions and Financial Frictions: Estimating with Structural Restrictions on Firm Value and Investment." Journal of Development Economics 110 (September): 107–22.
- Cockx, Bart, and Matteo Picchio. 2012. "Are Short-Lived Jobs Stepping Stones to Long-Lasting Jobs?" Oxford Bulletin of Economics and Statistics 74 (5): 646–75.
- Cole, Matthew A., Robert J.R. Elliott, Giovanni Occhiali, and Eric Strobl. 2018. "Power Outages and Firm Performance in Sub-Saharan Africa." Journal of Development Economics 134 (September): 150-59.
- Collewet, Marion, and Jan Sauerman. 2017. "Working Hours and Productivity." Discussion Paper 10722, Institute of Labor Economics IZA, Bonn.
- Collier, Paul, Martina Kirchberger, and Måns Söderbom. 2015. "The Cost of Road Infrastructure in Low and Middle Income Countries." Policy Research Working Paper 7408, World Bank, Washington, DC.
- Corcoran, Adrian, and Robert Gillanders. 2015. "Foreign Direct Investment and the Ease of Doing Business." Review of World Economics 151 (1): 103–26.
- Cournède, B., O. Denk, and P. Garda. 2016. "Effects of Flexibility-Enhancing Reforms on Employment Transitions." OECD Economics Department Working Papers 1348, OECD Publishing, Paris.
- Coviello, Decio, and Mario Mariniello. 2014. "Publicity Requirements in Public Procurement: Evidence from a Regression Discontinuity Design." Journal of Public Economics 109 (January): 76-100.
- Cremers, Martijn, and Allen Ferrell. 2014. "Thirty Years of Shareholder Rights and Firm Valuation." Journal of Finance 69 (3): 1167–96.
- Decarolis, Francesco, and Giuliana Palumbo. 2015. "Renegotiation of Public Contracts: An Empirical Analysis." Economics Letters 132 (July): 77-81.
- Demenet, Axel, Mireille Razafindrakoto, and François Roubaud. 2016. "Do Informal Businesses Gain from Registration and How? Panel Data Evidence from Vietnam." World Development 84 (August): 326-41.
- Dermigüç-Kunt, Asli, Bálint L. Horváth, and Harry Huizinga. 2017. "How Does Long Term Finance Affect Economic Volatility?" Journal of Financial Stability 33 (December): 41-59.
- Dierkes, Maik, Carsten Erner, Thomas Langer, and Lars Norden. 2013. "Business Credit Information Sharing and Default Risk of Private Firms." Journal of *Banking & Finance* 37 (8): 2867–78.

- Di Tella, Rafael, and Robert MacCulloch. 2005. "The Consequence of Labor Market Flexibility: Panel Evidence Based on Survey Data." European Economic Review 49 (5): 1225-59.
- Djankov, Simeon. 2016. "The Doing Business Project: How It Started: Correspondence." Journal of Economic Perspectives 30 (1): 247–48.
- Djankov, Simeon, and Rita Ramalho. 2009. "Employment Laws in Developing Countries." Journal of Comparative Economics 37 (1): 3–13.
- Djankov, Simeon, Tim Ganser, Caralee McLiesh, Rita Ramalho, and Andrei Shleifer. 2010. "The Effect of Corporate Taxes on Investment and Entrepreneurship." American Economic Journal: Macroeconomics 2 (3): 31–64.
- Djankov, Simeon, Dorina Georgieva, and Rita Ramalho. 2018. "Business Regulations and Poverty." Economics Letters 165 (April): 82-87.
- Djankov, Simeon, Rafael La Porta, Florencio López-de-Silanes, and Andrei Shleifer. 2002. "The Regulation of Entry." Quarterly Journal of Economics 117 (1): 1–37.
- Djankov, Simeon, Caralee McLiesh, and Rita Ramalho. 2006. "Regulation and Growth." Economic Letters 92 (3): 395-40.
- Djankov, Simeon, Darshini Manraj, Caralee McLiesh, and Rita Ramalho. 2005. "Doing Business Indicators: Why Aggregate, and How to Do It." World Bank, Washington, DC.
- Doblas-Madrid, Antonio, and Raoul Minetti. 2013. "Sharing Information in the Credit Market: Contract-Level Evidence from U.S. Firms." Journal of Financial Economics 109 (1): 198-223.
- Dreher, Axel, and Martin Gassebner. 2013. "Greasing the Wheels? The Impact of Regulations and Corruption on Firm Entry." Public Choice 155 (3/4): 413–32.
- Dudkin, Gerti, and Timo Välilä. 2006. "Transaction Costs in Public-Private Partnerships: A First Look at the Evidence." Competition and Regulation in Network Industries 7 (2): 307-31.
- Esteller-Moré, Alejandro, Leonzio Rizzo, and Riccardo Secomandi. Forthcoming. "The Heterogenous Impact of Taxation on FDI: A Note on Djankov et al. (2010)." Economics Letters.
- European Commission, DG Enterprise and Industry. 2014. "Evaluation of SMEs' Access to Public Procurement Markets in the EU: Final Report." European Commission, Brussels.
- Fairlie, R., and A. Robb. 2009. "Gender Differences in Business Performance: Evidence from the Characteristics of Business Owners Survey." Small Business Economics 33 (4): 375-95.
- Favara, Giovanni, Erwan Morellec, Enrique Schroth, and Philip Valta. 2017. "Debt Enforcement, Investment, and Risk-Taking Across Countries." Journal of Financial Economics 123 (1): 22-41.
- Fernandes, Ana P., Priscila Ferreira, and L. Alan Winters. 2018. "The Effect of Competition on Executive Compensation and Incentives." Journal of Human Resources 53 (3): 783-824.
- Fernández, Andrés, and César E. Tamayo. 2017. "From Institutions to Financial Development and Growth: What Are the Links?" Journal of Economic Surveys 31 (1): 17-57.
- Flyvbjerg, Bent. 2017. "Introduction: The Iron Law of Megaproject Management." In The Oxford Handbook of Megaproject Management, edited by Bent Flyvbjerg, 1–18. Oxford, U.K.: Oxford University Press.
- Flyvbjerg, Bent, Nils Bruzelius, and Werner Rothengatter. 2003. Megaprojects and Risk: An Anatomy of Ambition. Cambridge, U.K.: Cambridge University Press.

- Flyvbjerg, Bent, Massimo Garbuio, and Dan Lovallo. 2009. "Delusion and Deception in Large Infrastructure Projects." California Management Review 51 (2): 170-93.
- Francis, Bill B., Incheol Kim, Bin Wang, and Zhengyi Zhang. 2018. "Labor Law and Innovation Revisited." Journal of Banking and Finance 94 (September): 1–15.
- Gaitho, Nancy Wanjiru. 2013. "Role of Credit Reference Bureaus on Credit Access in Kenya: A Survey of Commercial Banks in Kenya." European Scientific Journal 9 (13): 301–14.
- Galletta, Sergio, Mario Jametti, and Agustin Redonda. 2015. "Highway to Economic Growth? Competition in Public Works Tenders in the Democratic Republic of Congo." South African Journal of Economics 83 (2): 240-52.
- Gianfreda, Giuseppina, and Giovanna Vallanti. 2017. "Institutions' and Firms' Adjustments: Measuring the Impact of Courts' Delays on Job Flows and Productivity." Journal of Law and Economics 60 (1): 135-72.
- Goldstein, Markus, Kenneth Houngbedji, Florence Kondylis, Michael O'Sullivan, and Harris Selod. 2018. "Formalization without Certification? Experimental Evidence on Property Rights and Investment." Journal of Development Economics 132 (May): 57-74.
- Harju, Jarkko, Tuomas Matikka, and Timo Rauhanen. 2019. "Compliance Costs vs. Tax Incentives: Why Do Entrepreneurs Respond to Size-Based Regulations?" Journal of Public Economics 173 (May): 139-64.
- Heckelman, Jac C. 2000. "Economic Freedom and Economic Growth: A Short-Run Causal Investigation." Journal of Applied Economics 3 (1): 71–91.
- Herrendorf, Berthold, and Arilton Teixeira. 2011. "Barriers to Entry and Development." International Economic Review 52 (2): 573-602.
- Hoffmann, Walther G., Franz Grumbach, and Helmut Hesse. 1965. The Growth of the German Economy since the Mid-19th Century. Berlin: Springer Verlag.
- Hornok, Cecília, and Miklós Koren. 2015. "Administrative Barriers to Trade." Journal of International Economics 96 (S1): S110-22.
- Houston, Joel F., Chen Lin, and Wensi Xie. 2018. "Shareholder Protection and the Cost of Capital." Journal of Law and Economics 61 (4): 677–710.
- Ibrahim, Muazu, and Paul Alagidede. 2017. "Financial Development, Growth Volatility and Information Asymmetry in Sub-Saharan Africa: Does Law Matter?" South African Journal of Economics 85 (4): 570-88.
- Iimi, Atsushi. 2006. "Auction Reforms for Effective Official Development Assistance." Review of Industrial Organization 28 (2): 109–28.
- Jales, Hugo. 2018. "Estimating the Effects of the Minimum Wage in a Developing Country: A Density Discontinuity Design Approach." Journal of Applied Econometrics 33 (1): 29-51.
- Jenwittayaroje, Nattawut, and Pornsit Jiraporn. 2019. "Do Independent Directors Improve Firm Value? Evidence from the Great Recession." International Review of Finance 19 (1): 207-22.
- Karas, Alexei, William Pyle, and Koen Schoors. 2015. "A 'de Soto Effect' in Industry? Evidence from the Russian Federation." Journal of Law and Economics 58 (2): 451-80.
- Kawaguchi, Daiji, and Tetsushi Murao. 2014. "Labor-Market Institutions and Long-Term Effects of Youth Unemployment." Journal of Money, Credit and Banking 46 (S2): 95-116.
- Kenny, Charles. 2009. "Transport Construction, Corruption and Developing Countries." Transport Reviews 29 (1): 21-41.

- Kinsey, Megan. 2004. "Transparency in Government Procurement: An International Consensus." Public Contract Law Journal 34 (1): 155.
- Klapper, L., L. Laeven, and R. Rajan. 2006. "Entry Regulation as a Barrier to Entrepreneurship." Journal of Financial Economics 82 (3): 591–629.
- Kleinknecht, Albert, Flore N. van Schaik, and Haibo Zhou. 2014. "Is Flexible Labour Good for Innovation? Evidence from Firm-Level Data." Cambridge Journal of Economics 38 (5): 1207-19.
- Knack, Stephen, Nataliya Biletska, and Kanishka Kacker. 2017. "Deterring Kickbacks and Encouraging Entry in Public Procurement Markets: Evidence from Firm Surveys in 88 Developing Countries (English)." Policy Research Working Paper 8078, World Bank, Washington, DC.
- Kraay, Aart, and Norikazu Tawara. 2013. "Can Specific Policy Indicators Identify Reform Priorities?" Journal of Economic Growth 18 (3): 253-83.
- Kugler, Adriana D., and Gilles Saint-Paul. 2004. "How Do Firing Costs Affect Worker Flows in a World with Adverse Selection?" Journal of Labor Economics 22 (3): 553-84.
- La Porta, Rafael, and Andrei Shleifer. 2008. "The Unofficial Economy and Economic Development." Tuck School of Business Working Paper 2009-57, Dartmouth College, Hanover, NH.
- —. 2014. "Informality and Development." Journal of Economic Perspectives 28 (3): 109–26.
- Lauer, Josh. 2017. Creditworthy: A History of Consumer Surveillance and Financial Identity in America. New York: Columbia University Press.
- Lawless, Martina. 2013. "Do Complicated Tax Systems Prevent Foreign Direct Investment?" Economica 80 (317): 1-22.
- Levine, Ross, Chen Lin, and Wensi Xie. 2016. "Spare Tire? Stock Markets, Banking Crises, and Economic Recoveries." Journal of Financial Economics 120 (1):
- Lichand, Guilherme, and Rodrigo R. Soares. 2014. "Access to Justice and Entrepreneurship: Evidence from Brazil's Special Civil Tribunals." Journal of Law and Economics 57 (2): 459-99.
- Lisi, Domenico, and Miguel A. Malo. 2017. "The Impact of Temporary Employment on Productivity." Journal for Labour Market Research 50 (1): 91–112.
- Madaus, Stephan. 2017. "The New Age of Debt and the Common Function of Insolvency and Restructuring Law." Eurofenix Spring: 14.
- Marinescu, Ioana. 2009. "Job Security Legislation and Job Duration: Evidence from the United Kingdom." Journal of Labor Economics 27 (3): 465-86.
- Martincus, Christian Volpe, Jerónimo Carballo, and Alejandro Graziano. 2015. "Customs." Journal of International Economics 96: 119–37.
- Moyo, Busani. 2013. "Power Infrastructure Quality and Manufacturing Productivity in Africa: A Firm-Level Analysis." Energy Policy 61 (October): 1063–70.
- Munemo, Jonathan. 2014. "Business Start-Up Regulations and the Complementarity between Foreign and Domestic Investment." Review of World Economics 150 (4): 745-61.
- Muûls, Mirabelle. 2015. "Exporters, Importers and Credit Constraints." Journal of International Economics 95 (2): 333-43.
- Onur, Ilke, Rasim Özcan, and Bedri Taş. 2012. "Public Procurement Auctions and Competition in Turkey." Review of Industrial Organization 40 (3): 207–23.
- Ordoñez, Guillermo. 2013. "The Asymmetric Effects of Financial Frictions." Journal of Political Economy 121 (5): 844-95.

- Pavel, Jan, and Eilia Sičáková-Beblavá. 2013. "Do E-Auctions Really Improve the Efficiency of Public Procurement? The Case of the Slovak Municipalities." Prague Economic Papers 2013 (1): 111-24.
- Payne, Jennifer. 2013. "Debt Restructuring in English Law: Lessons from the US and the Need for Reform." University of Oxford Legal Research Series, Paper No. 89/2013, Oxford, U.K.
- —. 2014. Schemes of Arrangement: Theory, Structure and Operation. Cambridge, U.K.: Cambridge University Press.
- Pencavel, John. 2014. "The Productivity of Working Hours." Discussion Paper 8129, Institute of Labor Economics IZA, Bonn.
- Ponticelli, Jacopo, and Leonardo S. Alencar. 2016. "Court Enforcement, Bank Loans, and Firm Investment: Evidence from a Bankruptcy Reform in Brazil." Quarterly Journal of Economics 131 (3): 1364–1413.
- Ramalho, Rita, and Valentina Saltane. 2019. "Does Media Stimulate Reform Efforts?" Policy Research Working Paper 8984, World Bank, Washington, DC.
- Rocha, Rudi, Gabriel Ulyssea, and Laísa Rachter. 2018. "Do Lower Taxes Reduce Informality? Evidence from Brazil." Journal of Development Economics 134 (September): 28–49.
- Rose-Ackerman, Susan. 1996a. "The Political Economy of Corruption: Causes and Consequences." Viewpoint Note 74, World Bank, Washington, DC.
- —. 1996b. "Redesigning the State to Fight Corruption." Viewpoint Note 75, World Bank, Washington, DC.
- Schneider, Friedrich. 2005. "The Informal Sector in 145 Countries." Department of Economics, University of Linz, Austria.
- Soraya, George. 2009. "Indonesian Experience Governance and Anticorruption Bali Urban Infrastructure Project (BUIP)," presentation to the World Bank GAC in Projects Group, April 21.
- Tchamyou, Vanessa S., and Simplice A. Asongu. 2017. "Information Sharing and Financial Sector Development in Africa." Journal of African Business 18 (7):
- Vig, Vikrant. 2013. "Access to Collateral and Corporate Debt Structure: Evidence from a Natural Experiment." Journal of Finance 68 (3): 881–928.
- Waseem, Mazhar. 2018. "Taxes, Informality and Income Shifting: Evidence from a Recent Pakistani Tax Reform." Journal of Public Economics 157 (January): 41-77.
- Wells, Jill. 2013. "Corruption and Collusion in Construction: A View from the Industry." In Corruption, Grabbing and Development, edited by Tina Søreide and Aled Williams, 23–34. Northampton, U.K.: Edward Elgar Publishing.
- World Bank. 2012. Why Reform Public Procurement? Washington, DC: World Bank.
- —. 2018. World Development Report 2019: The Changing Nature of Work. Washington, DC: World Bank.
- Yamada, Ken. 2016. "Tracing the Impact of Large Minimum Wage Changes on Household Welfare in Indonesia." European Economic Review 87 (August): 287-303.

